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Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 1997

TRA

Teachers Retirement Association

A Component Unit of the State of Minnesota

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Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 1997

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Teachers Retirement Association

A Component Unit of the State of Minnesota

Gary Austin
Executive Director

Suite 500, Gallery Building
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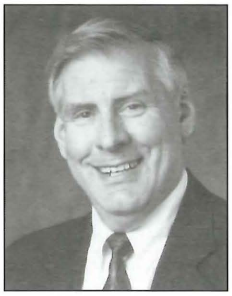
Saint Paul, MN 55102
(800) 657-3669
(612) 296-2409

Report prepared by the Accounting Services Division

Table of Contents

Letter of Transmittal



Gary Austin
Executive Director

Teachers Retirement Association

Suite 500, Gallery Building
17 West Exchange Street
Saint Paul, MN 55102
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December 31, 1997

Members of the Board of Trustees
Teachers Retirement Association
17 West Exchange Street
Saint Paul, MN 55102

Dear Trustee:

We are pleased to present this Comprehensive Annual Financial Report (CAFR) of the Teachers Retirement Association (TRA) for the fiscal year ended June 30, 1997, our 66th year of service. This report includes the following five sections:

- **Introductory Section** describing our organizational structure and nature of operations;
- **Financial Section** containing the general purpose financial statements, notes to the financial statements, actuarial disclosures and the opinion of our independent auditor;
- **Investment Section** highlighting asset management and investment performance;
- **Actuarial Section** containing the certification and results of the actuarial valuation performed by Milliman & Robertson as of July 1, 1997; and
- **Statistical Section** summarizing TRA plan benefits and illustrating both current and historical data of interest.

We are solely responsible for the content of this report, including its financial statements, that should be helpful in understanding information about the pension fund and comparing our operating results with those of other teacher retirement systems.

Reporting Entity

Although you, as members of the Board of Trustees, have a broad scope of authority in the operations and management of TRA, the pension fund is governed by federal laws and state statutes. Therefore, for financial reporting purposes, TRA is considered a component unit of the State of Minnesota.

Accounting Basis and Internal Control

For fiscal year 1997, TRA has adopted the provisions of Statement #25 promulgated by the Governmental Accounting Standards Board (GASB). The financial statements are prepared using the accrual basis of accounting; revenues are recorded when earned and expenditures recorded when the underlying obligation is incurred. Investments are presented at fair market value. We also maintain a system of internal controls designed to ensure responsible safeguarding of assets and reliable financial records.

Financial Highlights

The TRA Statement of Plan Net Assets stands at nearly $13 billion. The tremendous performance in the investment markets over the past decade is the primary reason for the continued growth in the asset base. The implementation of GASB Statement 25 also added to the total for fiscal year 1997 because investments are now valued at fair market value rather than at cost.

The major sources of revenue for TRA are employee contributions, employer contributions, and investment earnings. Total revenues for fiscal year 1997 were $2.6 billion, nearly a 70 percent increase from the previous year. Strong investment returns in nearly every category of the portfolio contributed to the increase. The amount also represents the first time TRA has exceeded $2 billion in revenue in any one year.

The expenditures from the fund consist primarily of payments made to members and beneficiaries for retirement, disability, or survivor benefits. Total benefit payments for fiscal year 1997 were $427 million, an increase of 13 percent over the previous fiscal year. Benefit payments account for about 96 percent of our operating expenses. Eligible members may also choose to withdraw their contributions from the fund upon leaving employment. For fiscal year 1997, refunds to members totaled over $10 million. Administrative expenses for the year were about $4.5 million.

As of June 30, 1997, TRA had 454 reporting employer units, 68,554 active members and a total of 25,681 retirees, survivors, beneficiaries and disabled members who were receiving monthly benefits.

Actuarial Funding

The actuary retained by the Legislative Commission on Pensions and Retirement (LCPR) determines the actuarial liabilities and reserves of the pension fund using the entry age normal cost method. Our total net assets on an actuarial basis increased during the fiscal year from $9.54 billion to $11.1 billion. The total required reserves necessary to fund current and future retirees of the fund also increased from $10.37 billion to $ 10.96 billion. The comparison of net assets to required reserves shows the funding ratio for fiscal year 1997 was 101.28 percent. This is an increase from the comparable 92.04 percent for fiscal year 1996 and represents the first time in TRA history in which our defined benefit plan is considered fully funded from an actuarial standpoint.

The unfunded actuarial liability was approximately $825 million at the beginning of the fiscal year. At the close of the fiscal year, the unfunded actuarial liability was extinguished. Significant actuarial gains resulted from a favorable investment market and lower than expected increases in members' salaries.

Investment Strategies

All TRA assets are invested under the authority and direction of the State Board of Investment (SBI). SBI has developed strategic asset allocation and other investment policies to represent the long-term funding needs of our members. SBI, along with its Investment Advisory Council (IAC), also continually reviews its policies to ensure sufficient assets are available to finance promised benefits. The executive directors of the three statewide retirement systems sit on the IAC and represent their members in its role to advise SBI on investment related matters.

Fiscal year 1997 was another outstanding year for most financial assets. Amid continued low inflation and positive corporate earnings reports, the U.S. stock market produced exceptionally strong returns for the third consecutive year with the Wilshire 5000 Stock Index advancing 29.3 percent. With a small decline in interest rates for the 12-month period, the U.S. bond market, as measured by the Lehman Brothers Aggregate Bond Index, provided a respectable gain of 8.2 percent.

As in the previous year, international stock markets did not keep pace with the rapid rise in the U.S. markets but overall returns were very much in line with historical averages. The Morgan Stanley Capital International index of Europe, Australia, and the Far East (EAFE) gained 12.8 percent for the twelve months ended June 30, 1997. The gains produced by the markets of developing countries, often referred to as "emerging markets," also advanced by 12.8 percent for the year.

Within this generally favorable investment environment, the retirement assets under SBI's control performed well:

- The Basic Retirement Funds (active members) gained 21.8 percent during fiscal year 1997. The funds benefited from their high stock exposure as well as exceptionally strong returns from private equity investments such as venture capital and buy-out funds.

- The Minnesota Post Retirement Investment Fund (retired members) advanced by 20.9 percent for the year.

Economic Conditions and Outlook

Minnesota's economy continued to outperform the national averages during fiscal year 1997. In June, the state's unemployment rate stood at 3.2 percent, down 0.9 percentage points from the 4.1 percent observed one year earlier. That unemployment rate was well below the national rate of 5.0 percent. Payroll employment in Minnesota grew by 53,000 jobs during the 1997 fiscal year. In fiscal 1997, employment in Minnesota grew by 2.2 percent, the same rate as the U.S. average. At present, the state's most serious economic challenge is ensuring there will be sufficient workers to fill the jobs currently being generated.

Personal income in Minnesota is now estimated to have grown at a 6.6 percent annual rate during fiscal year 1997, well above the national average of 5.3 percent. Wage growth was strong, but as in neighboring Midwestern states, all of which also have strong growth in personal income, the agricultural sector was a major contributor.

Personal income in Minnesota is forecast to grow by 5.0 percent during the 1998 fiscal year, slightly below the average rate forecast for the nation. Payroll employment is expected to grow at a 2.1 percent annual rate, consistent with the national average. Wage and salary income growth, however, is projected to lag the national average rate as states outside the Midwest also begin to feel labor market pressures and part-time workers elsewhere increase their hours worked. In Minnesota, most part-time workers have already increased the number of hours worked to, or beyond, the levels they desire.

Professional Services

As you are aware, we purchase actuarial services from the firm Buck Consultants of San Francisco, California and the annual actuarial valuation of the pension fund is prepared by Milliman & Robertson, Inc., the actuary retained by the Legislative Commission on Pensions and Retirement.

The Office of the Attorney General provides your legal counsel and the State Office of the Legislative Auditor conducts an annual financial audit of the pension fund and prepares a report. (See pages 10-11.) All financial transactions, including the disbursements from the pension fund, are processed through the centralized controls of the Minnesota Accounting and Procurement System, under the supervision of the state departments of Finance and Administration.

Financial Communication

An annual statement of account for fiscal year 1997 was mailed to each active member in December 1997. This statement provides current and cumulative information related to salaries, contributions, and service credit. Projected and deferred retirement benefit estimates are also provided for eligible members. A plan summary with financial and actuarial data for the year ended June 30, 1997 is distributed to each active and retired member in the Winter edition of the *TRIB*, our quarterly newsletter.

Internal Operations

During the fiscal year, we sought passage of the Public Pension Reform and Uniformity Proposal that was signed into law June 2, 1997 as Chapter 233 by Governor Arne H. Carlson. The enactment of the law culminated a two-year process to increase initial pension benefits in exchange for a slight one percent reduction in future post-retirement annual adjustments. The law also obtained uniformity in the formula multiplier to 1.7 percent for Coordinated members of the three statewide retirement systems and three first class city teacher funds.

For TRA Coordinated members, the level benefit formula multiplier rose from 1.63 to 1.7 percent. The step-rate formula multiplier (used for the Rule of 90) increased for the first ten years of service from 1.13 to 1.2 percent for Coordinated members. Any remaining years of service under the step-rate formula receive 1.7 percent.

TRA's contribution rates decreased significantly by 1.5 percent on July 1, 1997. The Coordinated member contribution rate dropped from 6.5 percent to 5 percent. The employer contribution rate was also reduced for Coordinated members from 8.14 percent to 6.64 percent.

On July 1, 1997, TRA retirees received a permanent increase in their base benefits in exchange for a slight one percent reduction in future Post Fund annual adjustments. The redistribution of the benefit stream was actuarially equivalent based on the age of the retiree.

Customer Services

In anticipation of this extensive legislation, TRA began to redeploy human and technological resources to process the retiree pay increases and to meet the surge in benefit estimate requests. As part of the effort to improve efficiency, we reorganized our employees into groups centered around major processes and services. A major feature of this new structure is a Telephone Service Center with specialists trained to address a wide-range of information requests and questions.

In addressing the immediate legislative changes, we modified the schedule of our TRA 2000 Business Reengineering initiative. Over the next year, we expect to evaluate proposals for the development and implementation of an integrated data processing system and optical imaging management system. The focus of these activities is to further improve our ability to deliver services to members and their beneficiaries in a timely, accurate and cost effective manner.

Our most important service is the accurate and timely payment of monthly benefits to over 26,000 retirees and benefit recipients. Approximately two-thirds of these payments are paid via electronic fund transfer, ensuring that the benefit is in the recipient's account on the day payable.

Our individual pre-retirement counseling sessions with members contemplating retirement continue as one of our most requested services. These retirement counseling sessions take place both in our main St. Paul office and at 15 locations throughout the state. Large and small group presentations are also available for those desiring general information on TRA retirement and benefit issues. The quarterly newsletter, the *TRIB*, continued to be mailed to all active and retired members. We continue to revise our forms and publications to improve readability and clarity of the information presented.

Acknowledgments

The preparation of this report is possible only through the combined efforts of our employees, employer units, and professional consultants. It is intended to provide a complete and reliable portrayal of the financial status of the pension fund. A copy is mailed to each public school in the state.

We would like to thank you, our advisers, employees, and the many people who diligently work to ensure the successful operation and financial soundness of our pension fund.

Respectfully submitted,

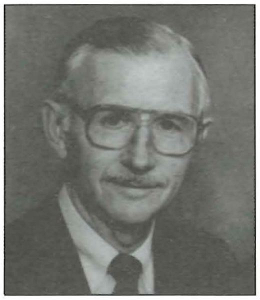
Gary Austin
Executive Director

John Wicklund
Assistant Executive Director
Accounting & Information Services

Board of Trustees

As of December 1, 1997

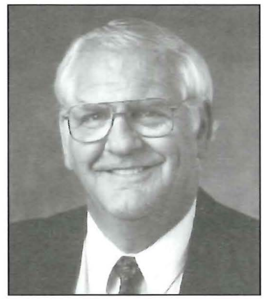
President



Vernell R. Jackels
Retiree Representative
Winona, MN

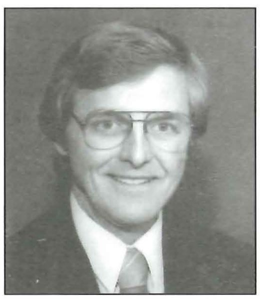
Vice President

Carol F. Ackerson
Elected Member
New Ulm, MN



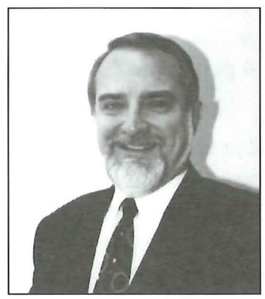
Robert E. Astrup
Elected Member
Columbia Heights, MN

Martha Lee (Marti) Zins
Elected Member
Hopkins, MN



Curtis D. Hutchens
Elected Member
St. Cloud, MN

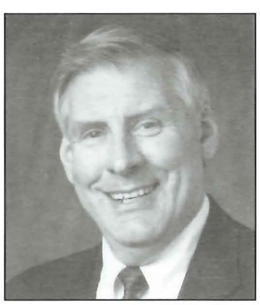
David Lamberger
Minnesota School Boards Association Representative



Robert Wedl
Commissioner of Children, Families, and Learning

Wayne Simoneau
Commissioner of Finance

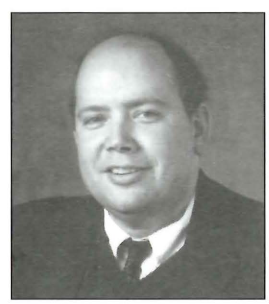
Administration



Gary Austin
Executive Director

John J. Gardner
Assistant Director
Customer Services
Mail & Records Services
Processing Services

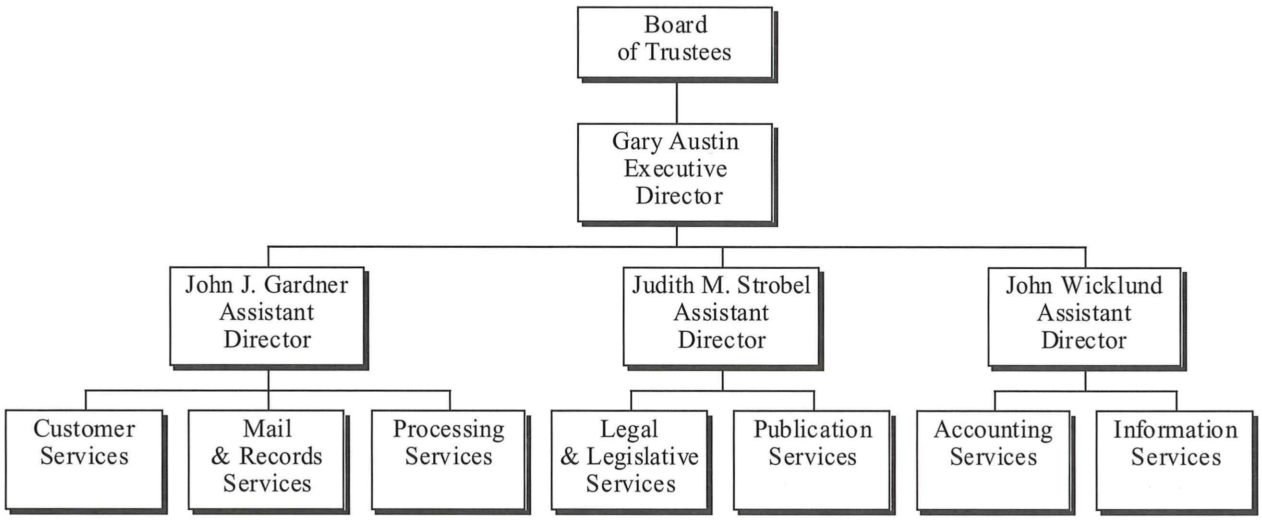
Judith M. Strobel
Assistant Director
Legal & Legislative Services
Publication Services



John Wicklund
Assistant Director
Accounting Services
Information Services

Administrative Organization

As of December 1997



Consulting Services

Actuary

Buck Consultants
San Francisco, California

Auditor

Office of the Legislative Auditor
Saint Paul, Minnesota

Legal Counsel

Office of the Attorney General
Saint Paul, Minnesota

Medical Adviser

Minnesota Department of Health
Minneapolis, Minnesota

Mission Statement

TRA provides retirement, disability and death benefits to Minnesota college faculty, administrators, public school teachers, retirees, their families and beneficiaries.

Our mission is to enhance the quality of life for Minnesota teachers and their beneficiaries and to assist them in planning for an independent and financially secure retirement.

To this end we are committed to offering quality customer services by providing retirement counseling, maintaining member data, administering funds, communicating accurate information and delivering benefits.

Our Values

Accuracy	Ensure that all information received, maintained and provided is clear and accurate.
Quality	Make high-quality services accessible to our customers.
Timeliness	Provide timely receipt and dissemination of information.
Efficiency	Make efficient use of technological and human resources in a team environment.
Employee Excellence	Provide ongoing employee development that encourages cooperation and mutual respect, focuses on common goals and recognizes superior performance.

Financial Section

STATE OF MINNESOTA
OFFICE OF THE LEGISLATIVE AUDITOR
JAMES R. NOBLES, LEGISLATIVE AUDITOR

Independent Auditor's Report

Board of Trustees
and
Executive Director
Teachers Retirement Association

We have audited the accompanying financial statements of the Teachers Retirement Association for the year ended June 30, 1997, as listed in the table of contents. These financial statements are the responsibility of the association's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards and *Government Auditing Standards*, as issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Teachers Retirement Association at June 30, 1997, and the results of its operations for the year then ended in conformity with generally accepted accounting principles.

Teachers Retirement Association implemented Governmental Accounting Standards Board (GASB) Statement No. 25, "Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans," during the year ended June 30, 1997. As a result, the Association changed its accounting and reporting methods for the pension trust funds as discussed in Note II. C. to the financial statements.

Teachers Retirement Association also implemented GASB Statement No. 28, "Accounting and Financial Reporting for Securities Lending Transactions." This statement requires the collateral for loaned securities and their related liabilities to be reported in certain circumstances as discussed in Note II. C. to the financial statements.

1ST FLOOR SOUTH, CENTENNIAL BUILDING • 658 CEDAR STREET • ST. PAUL, MN 55155
TELEPHONE 612/296-4708 • TDD RELAY 612/297-5353 • FAX 612/296-4712 • WEB SITE http://www.auditor.leg.state.mn.us

Board of Trustees
and
Executive Director
Teachers Retirement Association
Page 2

Our audit was made for the purpose of forming an opinion on the financial statements taken as a whole. The schedule of administrative expenses included in the financial section is presented for purposes of additional analysis and is not a required part of the financial statements of the Teachers Retirement Association. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

In accordance with *Government Auditing Standards*, we will also issue a report, expected to be released in January 1998, on our consideration of the Teachers Retirement Association's internal control structure and its compliance with laws and regulations.

James R. Nobles
Legislative Auditor

Claudia Gudvangen, CPA
Deputy Legislative Auditor

December 8, 1997

Teachers Retirement Fund
Statement of Plan Net Assets
As of June 30, 1997

Assets	
Cash and short-term investments	
Cash	$ 3,365,753
Short-term investments	21,637,140
Total Cash and short-term investments	$ 25,002,893
Receivables	
Employer Contributions	$ 35,481,120
Investment Income	105,842
Prepaid Expenses	4,980
Total Receivables	$ 35,591,942
Investments (at fair value)	
Equity in the Post Fund	$ 6,227,218,983
Fixed Income Pool	1,492,576,277
Venture Capital Pool	335,645,411
Real Estate Fund Pool	238,450,287
Resource Fund Pool	65,420,742
Indexed Equity Pool	1,031,804,368
Domestic Equity Pool	2,438,384,311
Global Equity Pool	1,081,912,760
Total Investments	$12,911,413,139
Securities Lending Collateral	$ 1,545,986,651
Fixed Assets Net of Accumulated Depreciation	$ 878,236
Total Assets	$14,518,872,861
Liabilities	
Current	
Accounts Payable	$ 5,282,700
Due to the Post Fund	45,965,776
Accrued Compensated Absences	327,385
Securities Lending Collateral	1,545,986,651
Total Liabilities	$ 1,597,562,512
Net Assets Held in Trust for Pension Benefits	$12,921,310,349

(A schedule of funding progress for the plan is presented on page 22)

The accompanying notes are an integral part of this statement.

Teachers Retirement Fund
Statement of Changes in Plan Net Assets
For the fiscal year ended June 30, 1997

Additions	
Contributions	
Member	$ 154,160,516
Employer	191,670,080
Total Contributions	$ 345,830,596
Investment Income	
Net Appreciation in Fair Value:	
Investment Pools	$ 132,448,142
Post-Retirement Participation	548,040,459
Interest	116,087,958
Dividends	495,278,092
Net Gain on Sales of Pools	486,832,472
Post Fund	522,021,416
Less: Investment Expense	(9,206,816)
Net Investment Income	$ 2,291,501,723
From Securities Lending Activities:	
Securities Lending Income	$ 80,012,491
Securities Lending Expenses:	
Borrower Rebates	(73,393,126)
Management Fees	(2,101,594)
Total Securities Lending Expenses	(75,494,720)
Net Income from Securities Lending	4,517,771
Total Net Investment Income	$ 2,296,019,494
Other Income	$ 704,736
Total Additions	$ 2,642,554,826
Deductions	
Retirement Benefits Paid	$ 427,588,141
Refunds of Contributions to Members	10,898,914
Administrative Expenses	4,552,372
Interest Paid to the Post Fund	638,751
Total Deductions	$ 443,678,178
Net Increase	$ 2,198,876,648
Net Assets Held in Trust for Pension Benefits	
Beginning of Year (as restated)	$10,722,433,701
End of Year	$12,921,310,349

The accompanying notes are an integral part of this statement.

Teachers Retirement Fund
Statement of Changes in Plan Net Assets
For Fiscal Year Ended June 30, 1997

	Member
Additions	
Contributions:	
Member Contributions	$ 153,874,337
Employer Contributions	0
Total Contributions	153,874,337
Investment Income:	
Net Appreciation in Fair Market Value	0
Interest	0
Dividends	0
Net Gain on Sales of Pools	0
Distributed Income from Post Fund	0
Investment Management Fees	0
Net Investment Income	0
From Securities Lending Activities:	
Securities Lending Income	0
Securities Lending Borrower Rebates	0
Securities Lending Management Fees	0
Net Income from Securities Lending	0
Other Income	0
Total Additions	$ 153,874,337
Deductions	
Benefits Paid	0
Refunds of Member Contributions	6,889,259
Administrative Expenses	0
Interest Paid MPRIF Fund	0
Total Expenses	$ 6,889,259
Net Increase	$ 146,985,078
Other Changes in Reserves	
Annuities Awarded	($ 60,657,049)
Other Transfers	1,863,300
Mortality Loss	0
Total Other Changes	($ 58,793,749)
Net Assets Held in Trust for Pension Benefits	
Beginning of Year (as restated)	1,164,651,185
End of Year	$ 1,252,842,514

The accompanying notes are an integral part of this statement.

Reserves

MPRIF Funds	Benefit	Total June 30, 1997
$ 0	$ 286,179	$ 154,160,516
0	191,670,080	191,670,080
0	191,956,259	345,830,596
548,040,459	132,448,142	680,488,601
0	116,087,958	116,087,958
0	495,278,092	495,278,092
0	486,832,472	486,832,472
522,021,416	0	522,021,416
0	(9,206,816)	(9,206,816)
1,070,061,875	1,221,439,848	2,291,501,723
41,014,926	38,997,565	80,012,491
(37,637,386)	(35,755,740)	(73,393,126)
(1,070,315)	(1,031,279)	(2,101,594)
2,307,225	2,210,546	4,517,771
0	704,736	704,736
$ 1,072,369,100	$ 1,416,311,389	$ 2,642,554,826
$ 418,162,399	$ 9,425,742	$ 427,588,141
0	4,009,655	10,898,914
0	4,552,372	4,552,372
0	638,751	638,751
$ 418,162,399	$ 18,626,520	$ 443,678,178
$ 654,206,701	$ 1,397,684,869	$ 2,198,876,648
$ 463,310,261	($ 402,653,212)	($ 0)
0	(1,863,300)	0
13,926,498	(13,926,498)	0
$ 477,236,759	($ 418,443,010)	($ 0)
5,095,775,524	4,462,006,992	10,722,433,701
$ 6,227,218,984	$ 5,441,248,851	$12,921,310,349

Notes to the Financial Statements

For the Fiscal Year Ended June 30, 1997

I. Plan Description

A. Organization

The Teachers Retirement Association (TRA) is an administrator of a multi-employer, cost-sharing retirement fund. TRA administers a Basic plan (without Social Security coverage) and a Coordinated Plan (coordinated with Social Security coverage) in accordance with Minnesota Statutes, Chapters 354 and 356.

B. Participating Members and Employers

Teachers employed in Minnesota's public elementary and secondary schools, and certain educational institutions maintained by the state (except those teachers employed by the cities of Minneapolis, Duluth, and St. Paul and by the University of Minnesota system) are required to be TRA members.

State university, community college, and technical college teachers first employed by the Minnesota State College and Universities (MnSCU) may elect TRA coverage within 90 days of first employment. Alternatively, these teachers may elect coverage through the Defined Contribution Retirement Plan (DCR) administered by MnSCU. A teacher employed by MnSCU and electing coverage by DCR is not a member of TRA except for purposes of Social Security coverage.

A schedule of employer units and membership is presented in Figure 1.

II. Significant Accounting Policies and Plan Asset Matters

A. Reporting Entity

TRA functions as a statutory entity created by the Laws of 1931, Chapter 406. A Board of Trustees has significant independence in overseeing the operations and management of TRA that has been construed as an agency of the state. Since TRA is subject to laws enacted by the state legislature, for reporting purposes, it is considered a component unit of the State of Minnesota and included in the state's Comprehensive Annual Financial Report as a pension trust fund.

B. Basis of Accounting

TRA financial statements for its defined benefit fund is prepared using the accrual basis of accounting. Employee and employer contributions are recognized as revenue in the year in which they are earned and become measurable. Expenses are recorded when the liability is incurred.

Figure 1

Employer Units

Independent school districts	351
Joint powers units	41
Colleges and Universities	42
State agencies	8
Charter schools	9
Professional organizations	3
Total Employer Units	454

Membership

Retirees, disabilitants and beneficiaries receiving benefits	25,681
Terminated employees with deferred vested benefits	6,356
Total	32,037
Current employees	
Vested	51,116
Non-vested	17,438
Total	68,554

C. Effect of Change in Accounting Principles

TRA has adopted the provisions of GASB Statement #25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans. The provisions of this statement require the restatement of prior year balances for the effect of changing reporting investments at cost to reporting investments at fair value. The effect of the change in accounting principles on the net assets held in trust for pension benefits as of June 30, 1996 as previously reported is presented below:

Figure 2

Restatement of Prior Year Balances

Beginning Balance	$ 9,385,746,289
Increase to Reflect TRA Fund to Market Value	466,426,888
Increase to Reflect TRA's Participation in Post Fund to Market Value	870,260,524
Beginning of Year (as restated)	$10,722,433,701

TRA also adopted the provisions of GASB Statement #28, Accounting and Financial Reporting for Securities Lending Transactions. The provisions of this statement require the reporting of certain asset and liability balances related to securities lending on the financial statements. The statement also requires that expenses related to securities lending be reported on the financial statements rather than being netted with lending income. The effect of this change in accounting principle had no effect on the net assets held in trust for pension benefits as of June 30, 1996.

TRA historically has presented comparative financial statements. Since complete information was not available to restate the financial statements for the fiscal year ending June 30,1996, management has decided that presentation of such financial statements could mislead readers of this report and therefore they are not presented.

D. Investment Policies

1. Pursuant to Minnesota Statutes, Chapter 11A, the state's retirement fund assets are commingled in various pooled investment accounts, administered by the State Board of Investment (SBI). As of June 30, 1997, the participation shares in the pooled accounts at market value for TRA was approximately 42 percent. The TRA share of the net assets of the Minnesota Post Retirement Investment Fund (Post Fund) at market values totaled 43.47 percent. Figure 3 provides specific totals.

2. Minnesota Statutes, section 11A.24 broadly restricts retirement fund investments to obligations and stocks of United States and Canadian governments, their agencies and their registered corporations; short-term obligations of specified high quality; restricted participation as a limited partner in venture capital, real estate or resource equity investments; restricted participation in registered mutual funds; and some qualified foreign instruments.

3. Investments are categorized to give an indication of the level of risk that is assumed. Risk Category 1 includes investments that are insured or registered, or for which the securities are held by the state or its agent in the state's name. Risk Category 2 includes uninsured and unregistered investments for which the securities are held by the broker, dealer, or counterparty's trust or agent in the state's name. Risk Category 3 includes uninsured or unregistered investments for which the securities held by the broker, dealer, or by its trust department or agent, but not in the state's name. TRA does not own any investments that are considered securities

for purposes of assessing credit risk. All TRA investments are in SBI-administered pools or open-end mutual funds. These investments are not considered for purposes of credit risk classification. Investments in any one organization do not represent 5 percent or more of plan net assets.

4. Information about the primary government's (State of Minnesota) investments, including credit risk classification, can be obtained from the Department of Finance, 400 Centennial Office Building, 658 Cedar Street, Saint Paul, Minnesota 55155. Information on investment activity and a listing of specific investments owned by the pooled asset accounts can be obtained from SBI, Suite 105, MEA Building, 55 Sherburne Avenue, Saint Paul, Minnesota 55155.

E. Method Used to Value Investments

Investments in the pooled accounts are reported at fair value. Figure 3 provides a summary of the cost and market values of the investments as of June 30, 1997 as reported on the Statement of Plan Net Assets. Short-term investments are reported at cost which approximates fair value. Securities traded on a national or international exchange are valued using the last reported trade price. The fair value of real estate investments is based on independent yearly appraisals. Investments that do not have an established market are reported at estimated fair value.

Investment income is recognized as earned. Accrued investment income of the pooled investment accounts is included in participation in the accounts. Gains or losses on sales or exchanges are recognized on the transaction date.

The cost of security transactions is included in the transaction price. Administrative expenses of SBI and investment management fees of the external money managers and the state's master custodian for pension fund assets are allocated to the funds participating in the pooled investment accounts. TRA's share of these expenses totaled $9,206,815.

F. Securities Lending

TRA does not own specific securities, but instead owns shares in pooled funds invested by SBI that is authorized to use securities lending transactions in accordance with Minnesota Statutes, section 356A.06, subdivision 7, and has, pursuant to a Custodial Trust Agreement, authorized State Street Bank and Trust Company, Boston, Massachusetts to act as agent in lending securities to broker-dealers and banks.

Figure 3

TRA Investment Portfolio
June 30, 1997

Basic (Active) Fund	Cost	Market
Pooled Accounts		
Fixed Income	$1,485,063,287	$1,492,576,277
Domestic Equity	2,217,329,479	2,438,384,311
Passive Equity	809,716,846	1,031,804,368
Global Income	973,328,364	1,081,912,760
Venture Capital	307,215,063	335,645,411
Real Estate	242,919,698	238,450,287
Resources Pool	49,746,389	65,420,742
Total	$6,085,319,126	$6,684,194,156
Short-Term Pooled Cash	21,637,140	21,637,140
Post Fund Account	4,808,918,000	6,227,218,983
Total Invested	$10,915,874,266	$12,933,050,279

During the fiscal year, State Street lent, on behalf of SBI certain securities held by State Street as custodian, and received cash (both United States and foreign currency) and securities issued or guaranteed by the United States government, sovereign debt of foreign countries, and irrevocable bank letters of credit as collateral. State Street did not have the ability to pledge or sell collateral securities absent a borrower default. Borrowers were required to deliver collateral for each loan in amounts equal to not less than 100 percent of the market value of the loaned securities.

SBI did not impose any restrictions during the fiscal year on the amount of the loans that State Street made on its behalf and State Street indemnified SBI by agreeing to purchase replacement securities, or return the cash collateral in the event a borrower failed to return a loaned security or pay distributions thereon. There were no such failures by any borrower to return loaned securities or pay distributions thereon during the fiscal year. Moreover, there were no losses during the fiscal year resulting from default of the borrowers or State Street.

During the fiscal year, SBI and the borrowers maintained the right to terminate all securities lending transactions on demand. The cash collateral received on each loan was invested, together with the cash collateral of other qualified tax-exempt plan lenders, in a collective investment pool. The relationship between the average maturities of the investment pool and SBI's loans was affected by the maturities of the loans made by other plan entities that invested cash collateral in the collective investment pool, which SBI could not determine. On June 30, 1997, SBI had no credit risk exposure to borrowers. TRA's portion of the collateral held and the market value of securities on loan from SBI as of June 30, 1997 were $1,597,105,137 and $1,545,986,651, respectively.

G. Accrued Compensated Absences

Employees of TRA accrue vacation leave, sick leave, and compensatory leave at various rates within limits specified in collective bargaining agreements. Accumulated amounts for compensated absences are accrued when incurred. Such leave is liquidated in cash primarily at the time of termination of employment.

H. Fixed Assets

Fixed assets are capitalized at the time of acquisition at cost. Depreciation is computed on a straight-line method over the useful life of the related assets. The estimated useful lives are three to ten years.

Fixed assets as presented on the June 30, 1997 Statement of Net Assets Available were $1,453,954 at cost. Accumulated depreciation totaled $575,718 resulting in a net fixed asset value of $878,236.

I. Operating Leases

TRA is committed under lease agreements for rental of office space through April 30, 2001. For accounting purposes, these leases are considered operating leases. Lease expenditures for fiscal year 1997 totaled $216,927. Minimum rental payments required as of June 30, 1997 are shown in Figure 4.

Figure 4

Minimum Rental Payments

Fiscal Year Ending June 30	Amount
1998	$ 227,581
1999	279,322
2000	313,931
2001	270,822
Total	$ 1,091,656

J. Administrative Expenses and Budget

The annual budget of TRA operations is developed by staff and approved by the Board of Trustees. The budget is sent to the Minnesota Department of Finance for analysis and policy decisions and is included in the Governor's Biennial Budget presentation to the legislature. The legislature adopts appropriation and expenditure limitations resulting in an approved budget for the Association.

TRA administrative costs are financed through investment earnings and turnover gains from employer contributions.

K. Cash

Cash on deposit consists of year-end receipts not processed as of the investment cutoff on June 30. TRA cash funds are held in the state treasury where they are commingled with other state funds. Minnesota Statutes, section 9.031 requires that deposits be secured by depository insurance and collateral shall be in amounts sufficient to ensure that deposits do not exceed 90 percent of the sum of the insured amount and the market value of the collateral. Throughout fiscal year 1997, the combined depository insurance and collateral was sufficient to meet legal requirements and secure all TRA deposits.

L. Accounts Receivable

Amounts classified as accounts receivable consist primarily of member and employer contributions received after the fiscal year end on salaries earned prior to June 30. Under Minnesota Statutes, section 354.52, subdivision 4, TRA employers must remit contributions at least monthly. If contributions are not remitted in a timely manner, interest at a rate of 8.5 percent, compounded annually, is assessed. If contributions are not received within 60 days of notification by TRA, the Commissioner of Finance is authorized to deduct the balance due TRA from state aids or appropriations due to that employer unit.

III. Changes in Plan Provisions

The 1997 Legislature improved initial benefits for TRA members for members who terminate service on or after July 1, 1997. The annuity accrual rate will increase while the employee and employer contributions were decreased. In order to pay for the increased benefit, the assumed earnings rate of the Post Fund has been increased from 5 percent to 6 percent and the cap on the inflation-based portion of an annuitant's annual benefit increase has been lowered from 3.5 percent to 2.5 percent.

Effective July 1, 1997, all benefit recipients received an actuarially equivalent permanent increase based on a change in the Post Fund earnings assumption. Members who terminate service after June 30, 1997 and whose benefits commence during the period July 2, 1997 through July 1, 2002 receive a percentage of the July 1, 1997 permanent increase.

IV. Contributions Required and Made

Minnesota Statutes, Chapter 354 sets the rates for employee and employer contributions. These rates, expressed as level percentages of annual covered payroll, are determined to accumulate sufficient assets for paying benefits. Level percentage of payroll contribution rates are calculated using the entry age normal actuarial funding method. TRA also uses the level percentage of payroll method to amortize the unfunded liability over a closed period ending June 30, 2020.

Contributions totaling $345,830,595 ($154,160,515 employee and $191,670,080 employer) were made in accordance with the actuarially determined contribution requirements. On page 48, these contributions are sufficient to meet the required normal costs, amortization of the unfunded liability and administrative costs. The sufficiency, as a percent of covered payroll is 1.79

percent. This translates into a contribution sufficiency of about $44.7 million for fiscal year 1997. The Legislative Commission on Pensions and Retirement annually reviews the adequacy of TRA's statutory contributions.

TRA's unfunded actuarial accrued liability was extinguished as of July 1, 1997. (See page 47.) Under Minnesota Laws 1997, Chapter 233, Article 1, section 50, TRA's additional employer contribution rate, currently at 1.64 percent for fiscal year 1998, will be eliminated effective the first day of the first full pay period after March 31, 1998.

V. Reserve Accounts

A. Minnesota Post Retirement Investment Fund (Post Fund)

For all retiring members, the reserves required to pay the cost of retirement benefits are transferred from the TRA Fund to the Post Fund which is managed by SBI. Participation in the Post Fund is shown at the actuarially determined required reserves level in accordance with Minnesota Statutes, section 11A.18, subdivision 7. It includes a 6% assumed income distribution and any mortality gains or losses as determined by an independent actuary hired by the state legislature. As of June 30, 1997, TRA's share of the net assets of the Post Fund at cost, is $4,808,918,000 and at market value is $6,227,218,983.

Beginning in fiscal year 1993, the Post Fund income available for distribution is determined using a post-retirement benefit increase formula based on total investment return rather than realized earnings. This formula contains both an inflation adjustment and an investment component. Stated as a percentage of eligible reserves, annuitants and other individuals receiving benefits at May 31, 1996 are eligible to receive the January 1, 1998 benefit increase shown in Figure 5.

Figure 5

January 1, 1998 Benefit Increase

Inflation-Based Benefit Increase	2.1%
Investment-Based Benefit Increase	7.9876%
Total Benefit Increase	10.0876%

B. Member Reserves

Accumulated member contributions, without interest, less the amounts refunded are recorded in the member reserve. Accumulated member contributions for current retirees are transferred to the Post Fund upon retirement. Employees who terminate their employment prior to retirement may elect to receive a refund of their contributions plus interest or wait for a deferred benefit.

C. Benefit Reserves

Employer contributions and investment income are recorded in the Benefit Designation. Administrative expenses, survivor and disability benefits, investment management fees, and interest paid to the Post Fund for late reserve transfers are paid from the benefit reserve.

Required Supplemental Schedule

Schedule of Employer Contributions

(Dollars in Thousands)

Year Ended June 30	Actuarially Required Contribution Rate (A)	Actual Covered Payroll (B)	Actual Member Contributions (C)	Annual Required Contribution [(A) x (B)] - (C)	Actual Employer Contribution*	Percentage Contributed
1991	13.11%	$1,943,375	$89,313	$165,463	$159,439	96.36%
1992	13.04%	1,989,624	91,506	167,941	162,370	96.68%
1993	13.13%	2,065,881	94,709	176,541	168,071	95.20%
1994	12.75%	2,150,300	100,803	173,360	171,855	99.13%
1995	14.73%	2,204,693	143,536	181,215	179,672	99.15%
1996	14.30%	2,268,390	148,051	176,329	184,495	104.63%
1997	12.78%	2,359,011	154,161	147,321	191,670	130.10%

* Includes contributions from other sources (if applicable).

Schedule of Funding Progress

(Dollars in Thousands)

Actuarial Valuation Date	Actuarial Value of Assets (A)	Actuarial Accrued Liability (AAL) (B)	Unfunded AAL (UAAL) (B - A)	Funded Ratio (A)(B)	Actual Covered Payroll (Previous FY) (C)	UAAL as Percentage of Covered Payroll (B - A)(C)
07/01/91	$5,614,924	$7,213,720	$1,598,796	77.84%	$1,943,375	82.27%
07/01/92	6,324,733	7,662,522	1,337,789	82.54%	1,989,624	67.24%
07/01/93	7,045,937	8,266,059	1,220,122	85.24%	2,065,881	59.06%
07/01/94	7,611,936	9,115,266	1,503,330	83.51%	2,150,300	69.91%
07/01/95	8,348,124	9,717,623	1,369,499	85.91%	2,204,693	62.12%
07/01/96	9,541,221	10,366,168	824,947	92.04%	2,268,390	36.37%
07/01/97	11,103,759	10,963,637	(140,122)	101.28%	2,359,011	-5.94%

Teachers Retirement Association

Notes to the Required Supplemental Schedules

June 30, 1997

Schedule of Funding Progress

The actuary for the Legislative Commission on Pensions and Retirement conducts a study every four years to determine the accuracy of the economic and demographic assumptions used for long-term TRA funding objectives. If actual actuarial experiences are less favorable than assumed by the actuary, the difference is added to unfunded accrued liabilities. Each time a new benefit is added which applies to service already rendered, an additional unfunded accrued liability is created. Minnesota Statutes require that all unfunded accrued liabilities be financed systematically over a closed period ending June 30, 2020.

To illustrate this feature, the TRA benefit formula multiplier was increased by .13% per year of service during fiscal year 1994. The benefit was funded solely through an increase in employee contributions effective in fiscal year 1995. Thus, the unfunded actuarial actuarial accrued liability rose dramatically for fiscal year 1994.

In an inflationary economy, the value of the dollar is decreasing. In this environment, employees pay in dollar amounts resulting in a dollar increase in unfunded actuarial accrued liabilities. This occurs at a time when the actual substance of these items may be decreasing. Looking at just the dollar amounts of unfunded liabilities can be misleading. Unfunded actuarial accrued liabilities divided by active employee payroll provides an index which clarifies understanding. The smaller the ratio of unfunded liabilities to covered payroll, the stronger the system. Observation of this relative index over a period of years will give an indication of whether the retirement association is becoming financially stronger or weaker.

Actuarial Assumptions and Methodologies

1. Funding Method

The entry age normal actuarial cost method of valuation is used in determining benefit liabilities and normal cost. As of June 30, 1997, the unfunded actuarial accrued liability was extinguished. (See page 47.) Any increases to the unfunded accrued liability resulting from benefit improvements or unfavorable actuarial experience are combined with the outstanding balance and amortized over a closed period ending June 30, 2020.

2. Asset Valuation Method

For actuarial purposes, Minnesota Statutes require valuation of all securities at cost plus one-third of the unrealized capital gains or losses.

3. Actuarial Assumptions

Significant actuarial assumptions employed by the actuary for funding purposes as of July 1, 1997, the date of the most recent actuarial valuation, include:

- Investment return - 8.5 percent.
- Inflation rate - 5 percent.
- Salary Increases - An inflation factor of 5 percent, plus a merit factor ranging from .25 percent to 2.25 percent, declining as the member ages.
- Benefit Increases after retirement - Payment of earnings on retired reserves in excess of 6 percent and an inflation guarantee up to 2.5 percent of the Consumer Price Index (CPI).

Administrative Expenses

For the Fiscal Year Ended June 30, 1997

	1997
Salaries	$2,190,791
Employer Contributions to Retirement	175,886
Employer Contributions to Social Security	160,893
Insurance Contributions	213,022
Actuarial Services	120,771
Audit Fees	43,929
Computer Support Services	386,320
Department Head Expenses	1,500
Depreciation of Office Furniture and Equipment	137,349
Dues and Subscriptions	7,050
Duplicating and Printing Expense	93,187
Employee Training	34,965
Insurance Expense	1,456
Lease of Office and Storage Space	216,927
Legal Fees	10,182
Management Consultant Services	75,956
Medical Services	34,719
Miscellaneous Administrative Expenses	7,367
Postage	321,980
Rental of Office Machines/Furnishings	11,152
Repairs and Maintenance	53,747
State Indirect Costs	43,853
Stationery and Office Supplies	125,733
Telephone	32,279
Travel-Director and Staff	31,746
Travel-Trustees	11,865
Travel Advance	0
Worker's Compensation	1,644
Board Substitute Teachers	3,012
Loss on Disposal of Equipment	3,091
Total Administrative Expenses	$4,552,372

Investments Section

Investment Summary

The assets of the Minnesota Teachers Retirement Association (TRA) are invested under the direction and authority of the State Board of Investment (SBI).

The investment portfolio for the active members of TRA has a market value of approximately $6.71 billion. In addition, TRA's share of the assets of the Minnesota Post Retirement Investment Fund (Post Fund), from which retiree benefits are paid, is approximately $6.23 billion. SBI members are Governor Arne H. Carlson (Chair), State Auditor Judith H. Dutcher, State Treasurer Michael A. McGrath, Secretary of State Joan Anderson Growe, and Attorney General Hubert H. Humphrey III. Howard Bicker serves as SBI's Executive Director.

The Legislature has established a 17-member Investment Advisory Council (IAC) to advise SBI and its staff on investment-related matters.

- SBI appoints ten members experienced in finance and investment. These members traditionally have come from the Minneapolis and St. Paul corporate investment community.
- The Commissioner of Finance and the executive directors of TRA, the Minnesota State Retirement System and the Public Employees Retirement Association are permanent members of the Council.
- Two active employee representatives and one retiree representative are appointed to the Council by the Governor.

The Council has formed four committees organized around broad investment subjects relevant to SBI's decision-making: Asset Allocation, Domestic Managers, International Managers and Alternative Investments.

Investment Advisory Council
(as of December 1997)

Gary Austin
Executive Director
Teachers Retirement Association

David Bergstrom
Executive Director
MN State Retirement System

John E. Bohan
Vice Pres., Pension Investments
Grand Metropolitan-Pillsbury

Roger Durbahn
Governor's Appointee
Retiree Representative

Douglas Gorence
Director, Pension Investments
Honeywell, Inc.

Kenneth F. Gudorf
Chief Executive Officer
Agio Capital Management, LLC

P. Jay Kiedrowski
Executive Vice President
Norwest Bank Minnesota

Han Chin Liu
Governor's Appointee
Active Employee Representative

Judith W. Mares
Financial Consultant
Mares Financial Consulting, Inc.

Malcolm W. McDonald**
Director and Corporate Secretary
Space Center, Inc.

Robert McFarlin
Governor's Appointee
Active Employee Representative

Gary R. Norstrem
Sr. Vice Pres., Institutional Mktg.
Piper Capital Management

Daralyn Peifer
Director, Benefits Finance
General Mills, Inc.

Wayne Simoneau
Commissioner
MN Department of Finance

Michael Troutman
Assistant to the President
ELCA Board of Pensions

Mary Most Vanek
Executive Director
Public Employees Retirement Assn

Jan Yeomans*
Treasurer
3M Co.

*Chair
**Vice-Chair

Richards & Tierney, Inc. of Chicago are general consultants to SBI. Pension Consulting Alliance of Studio City, California serves as a special project consultant. All investments made by SBI are governed by the prudent person rule and other standards codified in Minnesota Statutes, Chapters 11A and 356A.

All proposed investment policies are reviewed by the appropriate Committee and the full Council before they are presented to SBI for action.

Basic Retirement Funds

Investment Objectives

The pension contributions of active TRA members are invested through the Basic Retirement Funds (Basic Funds) administered by SBI. SBI has one overriding responsibility with respect to its management of the Basic Funds: to ensure that sufficient funds are available to finance promised benefits at the time of retirement.

The Basic Funds invest the pension contributions of most Minnesota public employees, including TRA members, during their working years. Employee and employer contribution rates are specified in state law as a percentage of an employee's salary. The rates are set so that contributions plus expected investment earnings will cover the projected cost of promised pension benefits. In order to meet these projected pension costs, the Basic Funds must generate investment returns of at least 8.5% on an annualized basis over time.

Normally, pension assets will accumulate in the Basic Funds for thirty to forty years during an employee's years of active service. This provides the Basic Funds with a long investment time horizon and permits SBI to take advantage of the long run return opportunities offered by common stocks and other equity investments in order to meet its actuarial return target.

SBI measures the performance of the Basic Funds relative to a composite of market indices that is weighted in a manner that reflects their long-term asset allocation policy. The Basic Funds are expected to exceed the composite index over a five-year period. Performance is measured net of all fees and costs to assure that SBI's focus is on its true net return.

Asset Allocation

The allocation of assets among stocks, bonds, and alternative investments can have a dramatic impact on investment results. In fact, asset allocation decisions overwhelm the impact of individual security selection within a total portfolio. Consequently, SBI has focused considerable attention on the selection of an appropriate long-term asset allocation policy for the Basic Funds.

The following table shows the actual asset mix of the Basic Funds at the end of fiscal year 1997.

Basic Funds Asset Mix
(June 30, 1997)

	Actual Mix	Policy Mix
Domestic Stocks	51.7%	45.0%
International Stocks	16.2%	15.0%
Bonds	22.3%	24.0%
Alternative Assets	9.3%	15.0%
Unallocated Cash	0.5%	1.0%
Total	100.0%	100.0%

Total Return Vehicles

SBI invests the majority of the Basic Funds' assets in *common stocks* (both domestic and international). A large allocation is consistent with the investment time horizon of the Basic Funds and the advantageous long-term risk-return characteristics of common stocks. Including international stocks in the asset mix allows SBI to diversify its holdings across world markets and offers the opportunity to enhance returns and reduce the risk/volatility of the total portfolio. The rationale underlying the inclusion of *private equity* (e.g. venture capital) is similar. However, the relatively small size of the private equity market presents a practical limit to the amount that may be invested in this asset class.

SBI recognizes that this sizable policy allocation to common stock and private equity likely will produce more volatile portfolio returns than a more conservative policy focused on fixed income securities. It is understood that this policy may result in quarters or even years of disappointing results. Nevertheless, the long run return benefits of this policy are expected to compensate for the additional volatility.

Diversification Vehicles

Other asset classes are included in the Basic Funds both to provide some insulation against highly inflationary or deflationary environments and to diversify the portfolio sufficiently to avoid excessive return volatility.

Real estate and resource (oil and gas) investments provide an inflation hedge that other financial assets cannot offer. In periods of rapidly rising prices, these "hard" assets have appreciated in value at a rate at least equal to the inflation rate. Further, even under more normal financial conditions, such as low to moderate inflation, the returns on these assets are not highly correlated with common stocks. As a result, their inclusion in the Basic Funds serves to dampen return volatility.

The allocation to *bonds* acts as a hedge against a deflationary economic environment. In the event of a major deflation, high quality fixed income assets, particularly long-term bonds, are expected to protect principal and generate significant capital gains. And, like real estate and resource funds, under normal financial conditions, bonds help to diversify the Basic Funds, thereby controlling return volatility.

Fiscal Year 1997 Changes

SBI did not make changes to its long-term asset allocation targets for the Basic Funds during fiscal year 1997. During the previous fiscal year, SBI added a 2% allocation to emerging markets within the international stock segment. Approximately half of this allocation was funded by the end of fiscal year 1996. During fiscal year 1997, the actual asset mix of the Basic Funds was in-line with its long-term targets. It should be noted that the unfunded allocation to alternative investments in the Basic Funds is held in domestic stocks until it is needed for investment. As a result, the actual amount invested in domestic stocks was above its long-term target.

Rate of Return Results

The Basic Funds produced a total rate of return for fiscal year 1997 of 21.8%. Over the last five years, the Basic Funds have generated an annualized return of 14.4%. The current market value of the total Basic Funds is about $15.9 billion. TRA's share of the fund is approximately 47% or $6.71 billion. Performance of specific money managers is presented later in this investment section.

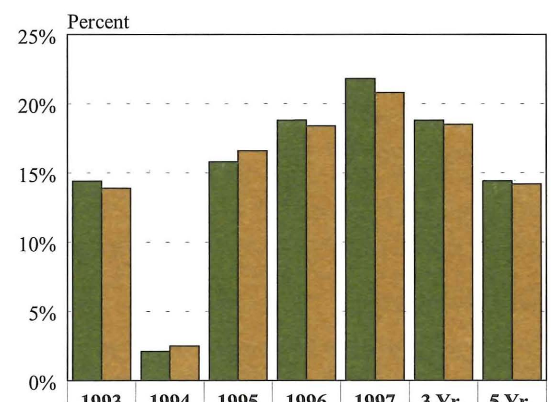
As stated earlier, the Basic Funds are expected to exceed the return of a composite of market indices over a five-year period. Performance relative to this standard will measure two effects:

- The ability of the managers selected by SBI, in aggregate, to add value to the returns available from the broad capital markets.
- The impact of SBI's rebalancing activity. (SBI rebalances the total fund when market movements take the stock or bond segments above or below their long-term asset allocation targets. The policy imposes a low risk discipline of *buy low-sell high* on a total fund basis.)

For the five-year period ending June 30, 1997, the Basic Funds out performed the composite index by 0.2 percentage point annualized. The primary contributors to the value added came from above index performance by the international stock, bond and private equity segments of the portfolio. Value added by these groups of managers was sufficient to counterbalance below index performance by the domestic stock segment during the period. SBI's policy of periodically rebalancing back to asset allocation targets also contributed importantly to the overall value added during the last five years.

Actual returns relative to the total fund composite index over the last five years are presented in the following graph:

Basic Funds Performance vs. Composite Index



	1993	1994	1995	1996	1997	3 Yr.	5 Yr.
Basic Funds	14.4%	2.1%	15.8%	18.8%	21.8%	18.8%	14.4%
Composite Index*	13.9%	2.5%	16.6%	18.4%	20.8%	18.5%	14.2%

* Adjusted to reflect the SBI's restrictions on liquor and tobacco stocks through 3/31/93 and American Home Products restriction through 10/31/93.

Post Retirement Fund

When a member retires, TRA transfers assets on behalf of the member to the Minnesota Post Retirement Investment Fund (Post Fund). The Post Fund includes the assets of retired public employees covered by nine statewide retirement plans: the eight plans which participate in the Basic Funds as well as the Legislative and Survivors Retirement Fund.

The assets of the Post Fund finance monthly annuity payments paid to retirees. On June 30, 1997, the Post Fund had a market value of $14.2 billion. TRA retirees' portion of this value is approximately $6.2 billion or 43.6%. The Post Fund generated an investment return of 20.9% for fiscal year 1997.

Investment Objectives

The investment time horizon of the Post Fund is 15-20 years and corresponds to the length of time a typical retiree can be expected to draw benefits. While this is shorter than the time horizon of the Basic Funds, it is still sufficiently long to allow SBI to take advantage of the long run return opportunities offered by common stock in order to meet its actuarial return target as well as to finance retirement benefit increases.

SBI measures the performance of the Post Retirement Fund relative to a composite of market indices that is weighted in a manner that reflects its long-term asset allocation policy. The Post Fund is expected to exceed the composite index over a five year period. Performance is measured net of all fees and costs to assure that SBI's focus is on true net return.

Asset Allocation

SBI revised its asset allocation strategy for the Post Fund in fiscal year 1993 in order to reflect the goals associated with the new post retirement benefit increase formula (described later). Throughout fiscal year 1993, the actual asset mix of the Post Fund moved gradually toward a 50% allocation to common stocks. During fiscal year 1994, SBI added allocations to international stocks and alternative investments. The current long-term asset allocation policy and actual asset mix of the Post Fund at the end of fiscal year 1997 is presented in the following table.

Post Fund Asset Mix
(June 30, 1997)

	Actual Mix	Policy Mix
Domestic Stocks	51.6%	50.0%
Int'l. Stocks	16.2	15.0
Bonds	29.4	27.0
Alternative Assets	0.7	5.0
Unallocated Cash	2.1	3.0
Total	100.0%	100.0%

The majority of the Post Fund's assets are invested in *common stocks* (both domestic and international). A large allocation is consistent with the moderately long time horizon of the Post Fund and the advantageous long term risk-return characteristics of common stocks. Including international stocks in the asset mix allows SBI to diversify its holdings across world markets and offers the opportunity to enhance returns and reduce the risk/volatility of the total portfolio.

SBI recognizes that this sizable allocation will be likely to produce more volatile portfolio returns than a more conservative policy focused on fixed income securities. It is understood that this policy may result in quarters or even years of disappointing results. Nevertheless, the long run return benefits of this policy are expected to compensate for the additional volatility.

Other asset classes are included in the Post Fund both to provide some insulation against highly deflationary environments and to diversify the portfolio sufficiently to avoid excessive return volatility.

The *bonds* in the Post Fund act as a hedge against a deflationary economic environment. In the event of a major deflation, high quality fixed income assets, particularly long term bonds, are expected to protect principal and generate significant gains. And, under more normal financial conditions, bonds diversify the Post Fund, thereby controlling return volatility on a year-to-year basis.

Yield oriented alternative investments are designed to provide the opportunity for higher long-term returns than those typically available from bonds yet still generate sufficient current income to be compatible with the objectives of the Post Fund. Typically, these investments (e.g. business loan participations and income producing private placements) are structured more like fixed income securities with the opportunity to participate in the appreciation of the underlying assets. While these investments may have an equity component, they display a return pattern more like a bond. As such they will help reduce the volatility of the total portfolio, but should also provide the opportunity to generate higher returns relative to more traditional bond investments.

Investment Management and Performance

Effective July 1, 1993, assets of the Post Fund were transferred to external managers. In order to gain greater operating efficiency, the Post Fund shares the same domestic stock, bond and international stock managers. The Post Fund is expected to exceed the return of a composite of market indices over a five-year period. Since the asset allocation changed dramatically during fiscal year 1993, performance relative to this standard is available only since fiscal year 1994. The Post Fund's performance exceeded its composite market index by 0.4 percentage points for the four-year period since July 1, 1993.

Actual returns relative to the total fund composite index over the last four years are shown in the graph on the right.

Benefit Increase Formula

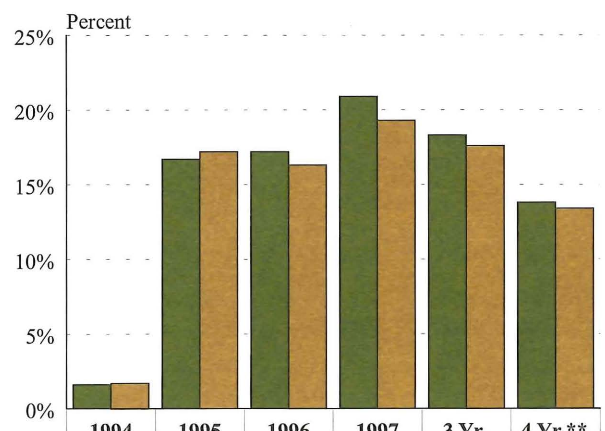
The retirement benefit increase formula of the Post Fund was changed through legislation enacted by the 1992 Legislature. The revised formula was effective beginning in fiscal year 1993 and is based on a combination of two components:

- ***Inflation Component.*** Each year, retirees receive an inflation-based adjustment equal to 100% of inflation, up to a maximum specified in statute. The inflation componenet is granted regardless of investment performance. The cap is necessary to maintain the actuarial soundness of the entire plan. It is the difference between the return assumption for the Basic Funds and the return assumption for the Post Fund.

  The return assumption in the Basic Funds is 8.5%. The return assumption for the Post Fund was 5.0% through fiscal year 1996. For fiscal year 1998, the return assumption for the Post Fund was changed to 6.0%. This means the cap on the inflation adjustment was 3.5% for fiscal years 1993-1997. In fiscal year 1998, and in future years, the inflation cap will be 2.5%.

- ***Investment Component.*** Each year, retirees also receive an investment-based adjustment, *provided* net investment gains are above the amount needed to finance the Post Fund's actuarial assumption and the inflation adjustment. Investment gains and losses will be spread over five years to smooth out the volatility of returns. In addition, all accumulated investment losses must be recovered before an investment-based adjustment is granted.

Post Fund Performance vs. Composite Index



	1994	1995	1996	1997	3 Yr.	4 Yr.**
Post Fund	1.6%	16.7%	17.2%	20.9%	18.3%	13.8%
Composite Index*	1.7%	17.2%	16.3%	19.3%	17.6%	13.4%

* Adjusted to reflect the SBI's restrictions on liquor and tobacco stocks through 3/31/93 and American Home Products restriction through 10/31/93.

** Since asset allocation, change to 50% domestic stock was implemented.

The current formula has two primary advantages:

- It provides benefit increases that are more sensitive to inflation than those granted under the old formula.
- It allows the Post Fund to maximize the long-term earning power of its assets. Without the need to generate the higher levels of current income required under the old formula, the Post Fund can increase its stock exposure and thereby enhance its prospects for higher total rates of return over the long run.

The Post Fund will provide a benefit increase of 10.0876% for fiscal year 1997 payable January 1, 1998. As noted earlier, this increase is comprised of two components:

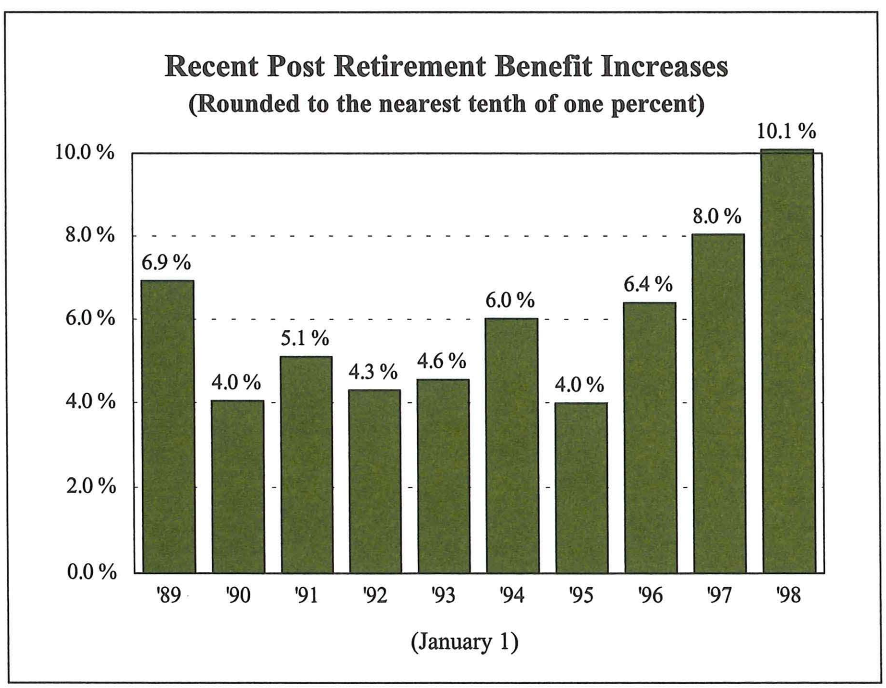
- *Inflation component* of 2.1% which is equal to 100% of the reported Consumer Price Index for wage earners (CPI-W) increase for the twelve months ending June 30, 1997. (This is the same inflation index used to calculate increases in Social Security payments.)
- *Investment component* of 7.9876%. This represents a portion of the market value increase that exceeds the amount needed to cover the actuarial assumed rate of return and the inflation adjustment.

Benefit increases granted for the past ten years are shown in the graph below.

Prior to fiscal year 1993, the benefit increase formula was dependent on the level of excess realized income generated by the Post Fund. The 10.0876% increase granted for fiscal year 1997 represents the fifth post retirement adjustment provided under the new benefit increase formula described above.

The Basic Funds and the Post Fund share many of the same stock and bond managers. This is accomplished by grouping managers together, by asset class, into several investment pools. The individual funds participate in the Investment Pools by purchasing units which function much like shares of a mutual fund.

This investment management structure allows SBI to gain greater operating efficiency within asset classes and to keep money management costs as low as possible for all participants. Further information on investment activity and a listing of specific investments owned by the pooled accounts can be obtained from the Minnesota State Board of Investment, Suite 105, MEA Building, 55 Sherburne Avenue, St. Paul, MN 55155.



Stock and Bond Money Managers Retained by the SBI

Domestic Stock

Fiscal Year 1997 performance

Active Managers	Total Portfolio Return	Benchmark Return
Alliance Capital	41.7%	35.2%
American Express	25.4	34.5
Brinson Partners	32.7	28.6
Forstmann Leff	30.0	26.8
Franklin Portfolio	31.6	26.2
GeoCapital	9.1	5.6
Investment Advisers	15.1	27.5
Independence Associates	28.8	34.8
Lincoln Capital	32.1	35.8
Oppenheimer	37.1	31.4
Weiss Peck & Greer	1.3	8.5
Semi-Passive Managers		
Franklin Portfolio	33.7	32.5
J.P. Morgan	32.1	32.5
Barclays Global Investors	33.1	32.5
Passive Manager		
Barclays Global Investors	29.9	29.3
Aggregate Domestic Stock Pool*	**29.7**	—
Performance Standard		
Wilshire 5000	29.3	—

* includes Emerging Managers Program (see below)

The annualized return for the domestic stock portfolio for the last five years is 18.7%.

Emerging Managers Program

The Emerging Managers Program is designed to add performance value to the stock portfolio by investing funds with smaller firms which have the potential for strong returns during the initial years of their existence.

	Actual Return	Benchmark Return
CIC Asset Management	29.0%	32.8%
Cohen Klingenstein & Marks	37.8	32.8
Compass Capital	24.4	32.3
New Amsterdam	34.6	28.2
Valenzuela Capital	42.5	26.8
Wilke/Thompson	-7.2	10.9
Winslow Capital	18.8	28.0
Zevenbergen Capital	25.8	27.5

Stock and Bond Money Managers Retained by the SBI

International Stock

Fiscal Year 1997 performance

Active EAFE Managers	Actual Return	Benchmark Return
Brinson Partners	18.1%	12.8%
Marathon Asset Mgmt.	9.6	12.8
Rowe Price-Fleming	18.4	12.8
Scudder, Stevens & Clark	21.3	12.8
Active Emerging Markets Managers		
City of London	23.1*	20.3*
Genesis Asset Managers	22.0	12.8
Montgomery Asset Mgmt.	21.8	12.8
Passive EAFE Manager		
State Street Global Advisors	13.0	12.8
Equity Only Aggregate	**15.6**	
Aggregate International Pool**	**18.2**	
Asset Class Target		
Composite Index***	13.2	

* Manager retained November 1, 1996. Performance reflects November, 1996-June 1997 only.

** Includes impact of currency overlay gain/loss. During fiscal year 1997, the overlay program implemented by Record Treasury Management added 5.1% to the passive portfolio. The impact on the total program was a positive 2.4%.

***At the beginning of the fiscal year, the composite was weighted 91.8% EAFE Free and 8.2% Emerging Markets Free. At the close of the fiscal year, the composite was weighted 87% EAFE Free and 13% Emerging Markets Free.

The annualized return for the international portfolio since its October 1, 1992 inception is 15.0%.

Domestic Fixed Income

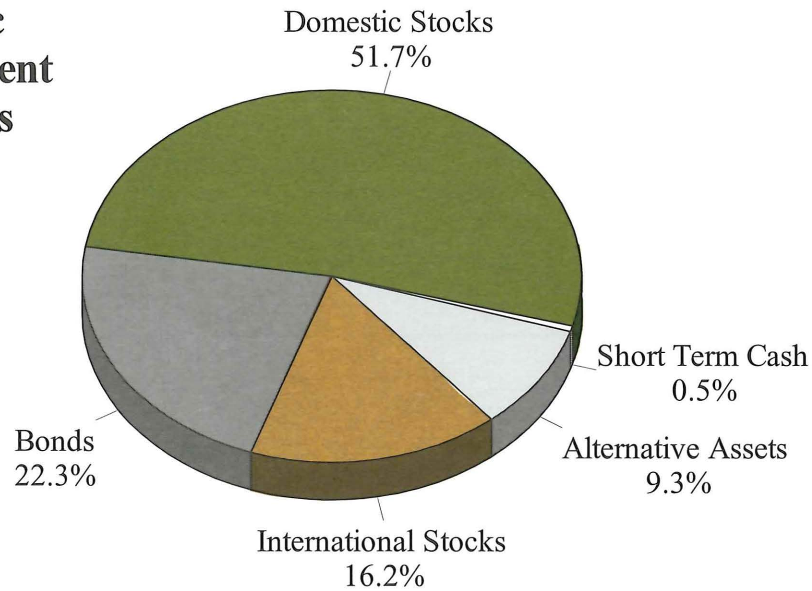
Fiscal Year 1997 performance

Active Managers	Actual Return
American Express	8.8%
BEA Associates	10.3
Investment Advisors	8.3
Miller, Anderson & Sherrerd	10.9
Standish, Ayer & Wood	10.0
Western Asset Management	10.9
Semi-Passive Managers	
BlackRock	8.7
Goldman Sachs	8.7
Lincoln Capital	8.2
Aggregate Bond Pool	**9.3**
Performance Standards	
Lehman Aggregate	8.2

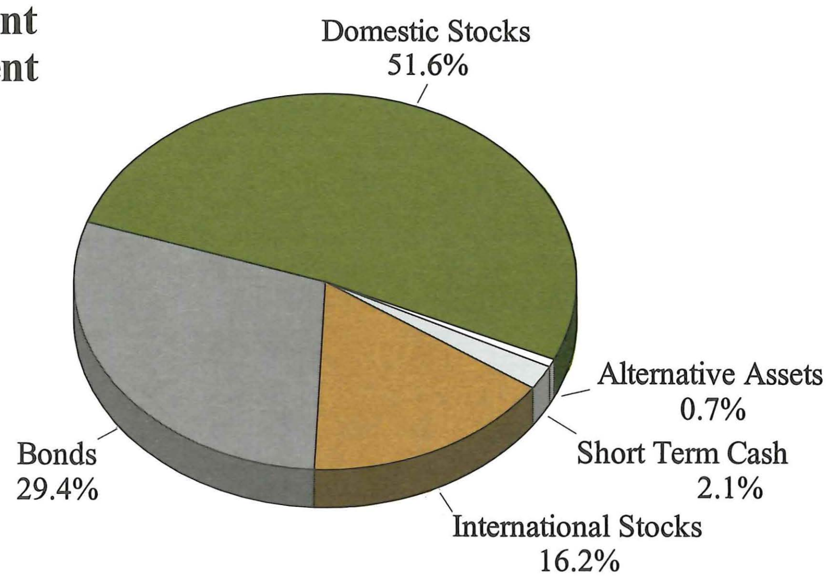
The annualized return for the bond portfolio for the last 5 years is 7.7%.

Teachers Retirement Fund
Portfolio Distribution
June 30, 1997

Basic Retirement Funds



Minnesota Post Retirement Investment Fund



Teachers Retirement Fund
List of Largest Assets Held
June 30, 1997

Composite Holdings of Top Ten Equities
(by Market Value)

Company	% of Portfolio
General Electric Co.	0.64%
Coca Cola Co.	0.51
Philip Morris Cos. Inc.	0.49
Exxon Corp.	0.45
Intel Corp.	0.45
Merck & Co. Inc.	0.44
Microsoft Corp.	0.38
KKR Invt. Fund III (Private Equity)	0.38
KKK Invt. Fund IV (Private Equity)	0.33
Bristol Myers Squibb Co.	0.31

Composite Holdings of Top Ten Bonds
(by Market Value)

Company	Coupon	Maturity Date	Rating	% of Portfolio
United States Treasury Notes	3.375	01/15/2007	AAA	1.39
United States Treasury Notes	6.500	08/31/2001	AAA	1.24
United States Treasury Bonds	6.525	02/15/2027	AAA	1.18
United States Treasury Notes	7.125	09/30/1999	AAA	1.11
United States Treasury Notes	5.625	11/30/2000	AAA	1.05
GNMA	8.000	01/01/2011	AAA	1.01
United States Treasury Bonds	10.750	08/15/2005	AAA	0.95
FNMA	7.500	01/01/1999	AAA	0.93
FNMA	7.000	01/01/1999	AAA	0.80
United States Treasury Bonds	8.875	08/15/2017	AAA	0.64

TRA's assets are commingled in various pooled investment accounts administered by the State Board of Investment (SBI). TRA does not own specific values of the underlying assets. The percentages shown are those of the total pooled accounts. Information on investment activity, a listing of specific investments owned by the pooled accounts and a schedule of fees and commissions can be obtained from SBI.

Summary of Investments*

As of June 30, 1997

	Book		Market	
	Book Value	**Total Book Value**	**Market Value**	**Total Market Value**
Fixed Income Investments				
Fixed Income Pool	$ 1,485,063,287		$ 1,492,576,277	
Total Fixed Income Investments		$ 1,485,063,287		$ 1,492,576,277
Equity Investments				
External Indexed Equity Pool	$ 809,716,846		$ 1,031,804,368	
Global Equity Pool	973,328,364		1,081,912,760	
External Domestic Equity Pool	2,217,329,479		2,438,384,311	
Total Equity Investments		$ 4,000,374,689		$ 4,552,101,439
Alternative Investments				
Internal Venture Capital Pool	$ 307,215,063		$ 335,645,411	
Internal Real Estate Fund Pool	242,919,698		238,450,287	
Internal Resource Fund Pool	49,746,389		65,420,742	
Total Alternative Investments		$ 599,881,150		$ 639,516,440
Short Term Investment				
Short Term Cash Equivalents	$ 21,637,140		$ 21,637,140	
Total Short Term Investments		$ 21,637,140		$ 21,637,140
Total Investments		$6,106,956,266		$ 6,705,831,296

*TRA's share of the Basic Funds does not include investments in the Post Fund.

General Information Regarding Investment of Funds

TRA's investments are made by SBI and external managers as prescribed by law, and are made only in such securities as are duly authorized legal investments in accordance with Minnesota Statutes, section 11A.24. State Street Bank and Trust of Boston acts as custodian of securities for the Basic Funds and the Post Fund. First Trust National Association, St. Paul, Minnesota is the current custodian of short term investments of TRA. Examination and verification of securities held by the custodians is performed periodically by the Minnesota Legislative Auditor.

Actuarial Section

Actuary's Letter

MILLIMAN & ROBERTSON, INC.
Actuaries & Consultants

Internationally WOODROW MILLIMAN

Suite 400, 15800 Bluemound Road, Brookfield, Wisconsin 53005-6069
Telephone: 414/784-2250
Fax: 414/784-7287

December 5, 1997

Legislative Commission on
Pensions and Retirement
55 State Office Building
St. Paul, Minnesota 55155

RE: Teachers Retirement Association Fund

Commission Members:

Pursuant to the terms of our Actuarial Services Contract, we have performed an actuarial valuation of the Fund as of July 1, 1997.

The results of our calculations are set forth in the following report, as are the actuarial assumptions upon which our calculations have been made. We have relied on the basic employee data and asset figures as submitted by the Teachers Retirement Association.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with the requirements of Section 356.215, Minnesota Statutes, and the requirements of the Standards for Actuarial Work, adopted by the Commission.

Respectfully submitted,

MILLIMAN & ROBERTSON, INC.

Thomas K. Custis

Thomas K. Custis, F.S.A., M.A.A.A.
Consulting Actuary

William V. Hogan

William V. Hogan, F.S.A., M.A.A.A.
Consulting Actuary

TKC/WVH/bh

Albany, Atlanta, Boston, Chicago, Dallas, Denver, Hartford, Houston, Indianapolis, Irvine, Los Angeles, Milwaukee, Minneapolis, New York, Omaha, Philadelphia, Phoenix, Portland, ME, Portland, OR, St. Louis, Salt Lake City, San Diego, San Francisco, Seattle, Tampa, Washington, D.C., Bermuda, Tokyo

WOODROW MILLIMAN Member Firms in Principal Cities Worldwide

Summary of Actuarial Assumptions and Methods

1. Interest

Pre-Retirement -- 8.5% per annum

Post-Retirement -- 8.5% per annum

2. Salary Increases

Reported salary for prior fiscal year, with new hires annualized, increased according to the table on the right to current fiscal year and annually for each future year.

Age	Salary Increases
20	7.25
25	7.10
30	7.00
35	7.00
40	6.70
45	6.05
50	5.60
55	5.35
60	5.25

3. Mortality

Pre-Retirement
Male - 1983 Group Annuity Mortality Table for males set back eight years.
Female - 1983 Group Annuity Mortality Table for females set back four years.

Post-Retirement
Male - Same as above except set back four years.
Female - Same as above except set back two years.

Post-Disability
Male - 1977 Railroad Retirement Board Mortality for Disabled Annuitants.
Female - 1977 Railroad Retirement Board Mortality for Disabled Annuitants.

4. Retirement Age

Age 62, or if over age 62, one year from valuation date. In addition, 45% of Basic Members and 30% of Coordinated Members are assumed to retire each year that they are eligible for the Rule of 90.

5. Separation From Service

Select and ultimate rates were based on plan experience as of June 30, 1989. Ultimate rates after the third year are illustrated in the Annual Separation table of sample values below. Select rates for the first three years are as follows:

	First Year	Second Year	Third Year
Less than 35	.3	.15	.1
35-44	.25	.125	.08
45-60	.3	.15	.1

Annual Separation Rate Per 10,000 Employees
(Sample Values)

	Pre-Retirement Death		Withdrawal		Disability	
Age	Male	Female	Male	Female	Male	Female
20	3	1	600	600	4	4
30	4	3	565	565	6	6
40	7	5	210	210	8	8
50	15	11	70	70	17	17
60	48	28	0	0	63	63

6. **Disability**	Graduated rates illustrated in table of sample values on previous page.
7. **Expenses**	Prior year expenses expressed as percentage of prior year payroll.
8. **Return of Contributions**	All employees withdrawing after becoming eligible for a deferred benefit were assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.
9. **Family Composition**	85% of male members and 65% of female members are assumed to be married. Female is three years younger than male. Assume members have no children.
10. **Social Security**	N/A
11. **Benefit Increases After Retirement**	Payment of earnings on retired reserves in excess of 5% accounted for by 5% post-retirement assumptions.
12. **Special Consideration**	Married members assumed to elect subsidized joint and survivor form of annuity as follows: Males -- 15% elect 50% J&S option 50% elect 100% J&S option Females -- 10% elect 50% J&S option 10% elect 100% J&S option
13. **Actuarial Cost Method**	Entry Age Normal Actuarial Cost Method with normal costs expressed as a level percentage of earnings. Under this method, actuarial gains (losses) reduce (increase) the Unfunded Actuarial Accrued Liability.
14. **Asset Valuation Method**	Cost value plus one-third unrealized gains or losses.
15. **Payment on the Unfunded Actuarial Accrued Liability**	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 5% per annum.

Valuation Report Highlights

(Dollars in Thousands)

	1996	1997
A. Contributions		
1. Statutory Contributions – Chapter 354 (% of Payroll)	14.66%	11.64%
2. Required Contributions – Chapter 356 (% of Payroll)	12.78%	9.85%
3. Sufficiency (Deficiency) (A.1-A.2)	1.88%	1.79%
B. Funding Ratios		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$ 9,541,221	$11,103,759
b. Current Benefit Obligations (Table 2)	$ 9,696,539	$10,262,081
c. Funding Ratio (a/b)	98.40%	108.20%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$ 9,541,221	$11,103,759
b. Actuarial Accrued Liability (Table 3)	$10,366,168	$ 10,963,637
c. Funding Ratio (a/b)	92.04%	101.28%
3. Projected Benefit Funding Ratio (Table 2)		
a. Current and Expected Future Assets	$13,494,541	$14,067,718
b. Current and Expected Future Benefit Obligations	$12,769,666	$13,231,366
c. Funding Ratio (a/b)	105.68%	106.32%
C. Plan Participants		
1. Active Members		
a. Number	68,490	68,554
b. Projected Annual Earnings	$ 2,391,385	$ 2,475,599
c. Average Annual Earnings (Actual $)	$ 34,916	$ 36,112
d. Average Age	42.9	43.1
c. Average Service	12.4	12.6
2. Others		
a. Service Retirements	22,434	23,694
b. Disability Retirements	409	425
c. Survivors	1,464	1,562
d. Deferred Retirements	5,767	6,356
e. Terminated Other Non-vested	16,444	16,653
f. Total	46,518	48,690

Actuary's Commentary

Purpose

The purpose of this valuation is to determine the financial status of the Plan. In order to achieve this purpose, an actuarial valuation is made at the beginning of each fiscal year as required by Minnesota Statutes, section 356.215.

Report Highlights

The financial status of the Plan can be measured by three different funding ratios:

- The Accrued Benefit Funding Ratio is a measure of current funding status, and when viewed over a period of years, presents a view of the funding progress. It is based upon benefits which have been earned by service to the valuation date. This year's ratio is 108.20%. The corresponding ratio for the prior year was 98.40%.
- The Accrued Liability Funding Ratio is also a measure of funding status and funding progress. It is based on the actuarial cost method that has historically been used by the State. For 1997 the ratio is 101.28%, which is an increase from the 1996 value of 92.04%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 106.32% shows that the current statutory contributions are sufficient.

Asset Information (Table 1)

Minnesota Statutes require that the asset value used for actuarial purposes recognize only a third of the unrealized gains and losses. This requirement exists because market values (which include all unrealized gains and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F1 to F6. It combines the cost value of the Assets Available for Benefits and one-third of the difference between the market value and cost value of those assets.

The term *Actuarial Value of Assets* is used to indicate that the value was determined for use in this actuarial valuation. Since Minnesota Statutes refer to this value as *Current Assets*, the latter phrase will be used in the remainder of this report.

This Plan participates in the Minnesota Post Retirement Investment Fund (Post Fund). After the Post Fund liability has been calculated for each participating Plan, the State Board of Investment (SBI) will determine each Plan's portion of the excess earnings for the January benefit increase, as well as the Plan's allocated market share of the Post Fund.

Actuarial Balance Sheet (Table 2)

An actuarial balance sheet provides a method for evaluating current and future levels of funding.

The Current Benefit Obligation used to measure current funding levels is calculated as follows:

- For Active Members - salary and service are projected to retirement to determine benefits for each member and the ratio of credited service to total service establishes the portion of the projected benefit to be . ed in calculating the current funding level.
- For Non-Active Members - the discounted value of benefits, including augmentation in cases where benefits have not commenced.

GASB Disclosure

Disclosure of the Current Benefit Obligation amounts used to be required by Statement #5 of the Governmental Accounting Standards Board (GASB). However, Statement #5 has been superceded by Statement #25. Under Statement #25, two new actuarial disclosures are required. (See pages 22 and 23.)

Actuarial Cost Method (Table 3)

The approach used by the State of Minnesota to determine contribution sufficiency is the Entry Age Normal Actuarial Cost Method. The primary characteristic of this method is that it allocates costs as a level percentage of payroll.

A comparison of this actuarial method (Table 3) to the actuarial balance sheet (Table 2) illustrates the two techniques for allocating liabilities of active members to past and future. As noted in the prior section, the balance sheet allocates benefits and the corresponding liabilities, on the basis of service. The method used in Table 3 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 2 and line A6, column 1 of Table 3).

An Unfunded Actuarial Accrued Liability is computed under the Entry Age Normal Actuarial Cost Method by comparing the liabilities allocated to past service (Actuarial Accrued Liability) to the Current Assets. This amount, line B3, is funded over the remaining years to the amortization date of July 1, 2020, by a series of payments that remain a constant percentage of payroll each year.

Sources of Actuarial Gains and Losses (Table 4)

The assumptions used in making the calculations using the Entry Age Normal Actuarial Cost Method are based on long-term expectations. Each year the actual experience will deviate from the long-term expectation. For a detailed analysis of the major components, refer to Table 4.

Contribution Sufficiency (Table 5)

This report determines the adequacy of Statutory Contributions by comparing the Statutory Contributions of the Required Contributions.

The Required Contributions, set forth in Chapter 356, consist of:

- Normal Costs based on the Entry Age Normal Actuarial Cost Method.
- A Supplemental Contribution for amortizing any Unfunded Actuarial Accrued Liability.
- An Allowance for Expenses.

Table 5 shows the Plan has a contribution sufficiency since the Statutory Contribution Rate is 11.64% compared to the Required Contribution Rate of 9.85%.

Changes in Actuarial Assumptions

There were no changes in actuarial assumptions for the current valuation.

Changes in Plan Provisions

The following four changes in Plan provisions will affect plan costs for the current valuation:

- Decrease of 1.5 percent in both member and employer contribution rates to 5.0 percent and 6.64 percent, respectively. The employer contribution will be reduced by 1.64 percent when full funding occurs.
- All formula percentage factors increased by 0.7 percent.
- Post-retirement benefit increases are paid on excess earnings over 6 percent instead of 5 percent. For those who do not receive the new formula percentage factors, a onetime permanent increase on July 1, 1997 in their benefits was made equal in cost to the change in the post-retirement benefit increase.
- Benefits are increased by the applicable percentage (50 to 10 percent of the July 1, 1997 permanent increase) for members who terminate after June 30, 1997 and for whom benefits commence during the period July 2, 1997 through July 1, 2002.

Statement of Plan Net Assets

Table 1

July 1, 1997

(Dollars in Thousands)

	Market Value	Cost Value
A. Assets in Trust		
1. Cash, Equivalents, Short-term Securities	$ 25,003	$ 25,003
2. Fixed Income	1,492,576	1,485,063
3. Equity	4,953,168	4,357,336
4. Real Estate	238,450	242,920
5. Equity in the Post Fund	4,808,918	4,808,918
6. Other	1,546,865	1,546,865
Subtotal	$ 13,064,980	$12,466,105
B. Assets Receivable	35,592	35,592
C. Liabilities	(1,597,563)	(1,597,563)
D. Net Assets Held in Trust for Pension Benefits		
1. Post Fund Reserves	4,808,918	4,808,918
2. Member Reserves	1,252,843	1,252,843
3. Other Non-Post Fund Reserves	5,441,248	4,842,373
4. Total Assets Available for Benefits	$ 11,503,009	$10,904,134

E. Determination of Actuarial Value of Assets		
1. Cost Value of Assets Available for Benefits (D4)		$10,904,134
2. Market Value (D4)	$ 11,503,009	
3. Cost Value (D4)	10,904,134	
4. Market Over Cost (E2 – E3)	$ 598,875	
5. One-third of Market Over Cost (E4) ÷ 3		199,625
6. Actuarial Value of Assets (E1 + E5) (Same as *Current Assets*)		$11,103,759

Actuarial Balance Sheet

Table 2

July 1, 1997

(Dollars in Thousands)

A. Current Assets (Table 1, E6)	$	11,103,759
B. Expected Future Assets		
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 5)		696,230
2. Present Value of Future Normal Costs		2,267,729
3. Total Expected Future Assets	$	2,963,959
C. Total Current and Expected Future Assets	$	14,067,718

D. Current Benefit Obligations	**Non-Vested**	**Vested**	**Total**
1. Benefit Recipients			
a. Retirement Annuities		$4,637,320	$ 4,637,320
b. Disability Benefits		79,913	79,913
c. Surviving Spouse and Child Benefits		193,485	193,485
2. Deferred Retirements with Future Augmentation		236,548	236,548
3. Former Members without Vested Rights		14,060	14,060
4. Active Members			
a. Retirement Annuities	11,767	4,685,421	4,697,188
b. Disability Benefits	175,119	0	175,119
c. Survivor's Benefits	60,120	0	60,120
d. Deferred Retirements	1,210	92,034	93,244
e. Refund Liability Due to Death or Withdrawal	0	75,084	75,084
5. Total Current Benefit Obligations	$248,216	$10,013,865	$ 10,262,081

E. Expected Future Benefit Obligations	$ 2,969,285
F. Total Current and Expected Future Benefit Obligations	$ 13,231,366
G. Current Unfunded Actuarial Liability (D5 – A)	($ 841,678)
H. Current and Future Unfunded Actuarial Liability (F – C)	($ 836,352)

Determination of Unfunded Actuarial Accrued Liability (UAAL) and Supplemental Contribution Rate — Table 3

July 1, 1997

(Dollars in Thousands)

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
	(1)	(2)	(3) = (1) – (2)
A. Determination of Actuarial Accrued Liability (AAL)			
1. Active Members			
a. Retirement Annuities	$ 7,411,682	$ 1,821,090	$ 5,590,592
b. Disability Benefits	287,207	114,036	173,171
c. Survivor's Benefits	93,585	34,279	59,306
d. Deferred Retirements	158,940	76,995	81,945
e. Refunds Due to Death or Withdrawal	118,626	221,329	(102,703)
f. Total	$ 8,070,040	$ 2,267,729	$ 5,802,311
2. Deferred Retirements with Future Augmentation	236,548		236,548
3. Former Members without Vested Rights	14,060		14,060
4. Annuitants in the Post Fund	4,808,918		4,808,918
5. Recipients Not in the Post Fund	101,800		101,800
6. Total	$13,231,366	$ 2,267,729	$10,963,637

B. Determination of Unfunded Actuarial Accrued Liability (UAAL)	
1. AAL (A6)	$10,963,637
2. Current Assets (Table 1, E6)	11,103,759
3. UAAL (B1 – B2)	($ 140,122)
C. Determination of Supplemental Contribution Rate	
1. Present Value of Future Payrolls through the amortization date of July 1, 2020	$38,395,525
2. Supplemental Contribution Rate (B3 ÷ C1)	0.00%

Changes in Unfunded Actuarial Accrued Liability (UAAL)

Table 4

Year Ending June 30, 1997

(Dollars in Thousands)

A. UAAL at Beginning of Year	$ 824,947
B. Change Due to Interest Requirements and Current Rate of Funding	
1. Normal Cost and Expenses	$ 254,878
2. Contribution	(345,831)
3. Interest on A, B1 and B2	$ 66,255
4. Total (B1 + B2 + B3)	$ 24,698
C. Expected UAAL at End of Year (A + B4)	$ 800,249
D. Increase (Decrease) Due to Actuarial Losses (Gains)	
Because of Experience Deviations from Expected	
1. Salary Increases	($ 115,603)
2. Investment Return	(660,151)
3. Post Fund Mortality	13,926
4. Mortality of Other Benefit Recipients	(4,682)
5. Other Items	23,163
6. Total	($ 743,347)
E. UAAL at End of Year Before Plan Amendments and Changes in Actuarial Assumption (C + D6)	$ 56,902
F. Change in Actuarial Accrued Liability Due to Plan Amendments	(197,024)
G. Change in Actuarial Accrued Liability Due to Changes in Actuarial Assumptions	0
H. UAAL at End of Year (E + F + G)	($ 140,122)

Determination of Contribution Sufficiency

Table 5

July 1, 1997

(Dollars in Thousands)

	Percent of Payroll	Dollar Amount
A. Statutory Contributions - Chapter 354		
1. Employee Contributions	5.00%	$123,892
2. Employer Contributions	6.64%	164,492
3. Total	11.64%	$288,384
B. Required Contributions - Chapter 356		
1. Normal Cost		
a. Retirement Benefits	7.82%	$193,540
b. Disability Benefits	0.47%	11,612
c. Survivors	0.15%	3,655
d. Deferred Retirement Benefits	0.26%	6.438
e. Refunds Due to Death or Withdrawal	0.96%	23,662
f. Total	9.66%	$238,907
2. Supplemental Contribution Amortization by July 1, 2020 of UAAL	0.00%	0
3. Allowance for Expenses	0.19%	4,704
4. Total	9.85%	$243,611
C. Contribution Sufficiency (Deficiency) [A3 – B4]	1.79%	$ 44,773

Note: Projected annual payroll for fiscal year beginning on July 1, 1997 is $2,475,599.

Summary of Actuarial and Unfunded Actuarial Liabilities

(Dollars in Thousands)

Valuation as of June 30	Aggregate Actuarial Liabilities	Valuation Assets	Assets as a % of Actuarial Liabilities	Unfunded Accrued Liabilities (UAL)	Annual Active Member Payroll	UAL as a % of Annual Active Member Payroll
1988	$ 5,586,441	$3,978,898	71.2%	$1,607,543	$1,594,391	100.8%
1989	6,249,413	4,567,997	73.1%	1,681,416	1,723,122	97.6%
1990	6,611,074	5,131,999	77.6%	1,479,075	1,785,459	82.8%
1991	7,213,720	5,614,924	77.8%	1,598,796	1,874,365	85.3%
1992	7,662,522	6,324,733	82.5%	1,337,789	1,934,014	69.2%
1993	8,266,059	7,045,937	85.2%	1,220,122	2,024,000	60.3%
1994	9,115,266	7,611,935	83.5%	1,503,331	2,104,578	71.4%
1995	9,717,623	8,348,124	85.9%	1,369,499	2,197,262	62.3%
1996	10,366,168	9,541,221	92.0%	824,947	2,252,383	36.6%
1997	10,963,637	11,103,759	101.3%	(140,122)	2,359,011	(5.9%)

Solvency Test

(Dollars in Thousands)

	Aggregate Accrued Liabilities				Portion of Actuarial Accrued Liabilities Covered by Reported Assets		
Valuation as of June 30	(1) Member Contributions	(2) Retirees and Beneficiaries	(3) Members (Employer Financed Portion)	Valuation Assets	(1)	(2)	(3)
1988	$ 616,436	$1,682,034	$3,287,971	$3,978,898	100%	100%	51.1%
1989	733,650	1,880,080	3,635,683	4,567,997	100%	100%	53.8%
1990	787,514	2,093,209	3,730,351	5,131,999	100%	100%	60.4%
1991	838,160	2,370,851	4,004,709	5,614,924	100%	100%	60.1%
1992	886,618	2,662,744	4,113,160	6,324,733	100%	100%	67.5%
1993	921,143	3,120,037	4,224,879	7,045,937	100%	100%	71.1%
1994	970,813	3,559,614	4,584,839	7,611,935	100%	100%	67.2%
1995	1,070,347	3,866,694	4,780,582	8,348,124	100%	100%	71.4%
1996	1,164,651	4,319,329	4,882,188	9,541,221	100%	100%	83.1%
1997	1,252,843	4,808,918	4,901,876	11,103,759	100%	100%	100.0%

Schedule of Active Member Valuation Data

Year Ended June 30	Active Members	Annual Payroll	Annual Average	% Increase in Average Pay
1988	63,326	$1,594,391,290	$25,178	2.6%
1989	64,796	1,723,121,553	26,593	5.6%
1990	64,324	1,785,459,190	27,757	4.4%
1991	65,093	1,874,364,682	28,795	3.7%
1992	65,557	1,934,014,000	29,501	2.5%
1993	65,268	2,024,000,000	31,017	5.0%
1994	66,514	2,104,578,000	31,641	2.1%
1995	67,558	2,197,262,000	32,524	2.8%
1996	68,490	2,252,383,000	32,888	1.1%
1997	68,554	2,359,011,000	34,411	4.6%

Schedule of Retirees and Beneficiaries

Year Ended June 30	Added During Year	Removed During Year	Number End of Year	Total Annual Benefits	% Increase in Total Annual Benefits	Average Annual Benefits
1988	889	456	15,892	$148,243,910	18.5%	$ 9,328
1989	994	501	16,385	160,849,985	8.5%	9,817
1990	1,262	511	17,136	179,792,053	11.8%	10,492
1991	1,499	541	18,094	200,415,271	11.5%	11,076
1992	1,630	512	19,212	227,066,655	16.7%	11,819
1993	2,166	568	20,810	256,630,249	13.0%	12,332
1994	1,886	559	22,137	309,036,770	20.2%	13,960
1995	1,632	601	23,168	338,857,152	9.6%	14,626
1996	1,806	667	24,307	378,072,148	11.6%	15,554
1997	2,063	689	25,681	427,588,141	13.1%	16,650

Statistical Section

Plan Summary

Purpose

The Minnesota Teachers Retirement Association (TRA) was established on July 1, 1931 by the state legislature. Its purpose is to improve educational service and better compensate teachers in order to make the occupation of teaching in Minnesota more attractive to qualified persons by providing a retirement benefit schedule that rewards faithful and continued service.

Administration

TRA is managed by eight trustees – three are statutorily appointed and five are elected. The statutory trustees are the Commissioner of Children, Families, and Learning, the Commissioner of Finance and a representative of the Minnesota School Boards Association. Four of the five elected trustees are active members and one is a retiree. Administrative management of the fund is vested in an Executive Director who is appointed by the Board of Trustees. The Board also contracts with an actuary and uses legal counsel provided by the office of the Attorney General.

Membership

All teachers employed in public elementary and secondary schools, joint powers, charter schools and all other educational institutions maintained by the State of Minnesota (except those teachers employed by the cities of Minneapolis, St. Paul, and Duluth or by the University of Minnesota) are required to be members of TRA. Teachers employed by Minnesota State Colleges and Universities (MnSCU) have a onetime election to join TRA. No Minnesota state college or university teacher is a member except for purposes of Social Security coverage if that teacher has coverage by the Defined Contribution Retirement Plan administered by the MnSCU Board.

Retirement Service Credit

Service credit for benefits is earned from teaching service performed on a full-time, part-time or substitute basis up to a maximum of 170 days per fiscal year (July 1 – June 30). Service credit may be obtained by using paid accumulated sick leave or by purchasing service for a qualified leave of absence. If a teacher teaches less than 170 full days, fractional service credit is given as the ratio of the number of full days taught to 170. If a teacher teaches only a fractional part of a day, service credit is given for a full day of teaching service for each five hours taught. Even though a teacher may teach more than five hours per day, not more than one day of service credit can be earned on any day. No more than one year of service credit may be earned during any fiscal year.

Financing

Benefits are financed by employee contributions, employer contributions, investment earnings and turnover gains. Turnover gains are employer contributions released to the fund when members take refunds of their own contributions.

Employee Contributions

TRA members pay a percentage of their gross annual salary as determined by their membership plan. Basic Plan members (without Social Security coverage) contribute 9% of their annual salary while Coordinated Plan members (coordinated with Social Security coverage) contribute 5% of their annual salary.

Employer Contributions

Local school districts and other TRA covered employer units provide contributions of 9% of total salary for members in the Basic Plan and 5% of total salary for members in the Coordinated Plan. In addition, the employer unit contributes an amount equal to 1.64% of total salary for amortizing the unfunded liability. For Coordinated Plan members the employer unit also makes the required matching contribution to the Social Security Administration.

Retirement Benefit

The retirement benefit is determined by a formula based on the average of the member's highest five successive annual salaries, an accumulated percentage factor based on the total years of service credit, and the member's age at retirement. The retirement benefits for members who were first hired before July 1, 1989, are different from the retirement benefits for members who were first hired after June 30, 1989.

Before July 1, 1989

For members first hired before July 1, 1989, the retirement benefits (with average salary defined as the average of the highest five successive annual salaries) are *the greater of:*

> 1.2% of average salary for the first 10 years of allowable service and 1.7% of average salary for each subsequent year of allowable service with a reduction of 0.25% for each month the member is under age 65 at the time of retirement (or under age 62 with 30 or more years of allowable service) and no reduction if age plus years of allowable service totals 90 or more.

OR

> 1.7% of average salary for each year of allowable service with augmented actuarial reduction (approximately 4.0%-5.5% per year) for each month the member is under age 65.

Early retirement benefit eligibility is age 55 with 3 or more years of allowable service or any age with at least 30 years of allowable service when using the smaller percentage factor.

For Basic system members (those without Social Security coverage) the formula percentages are 2.2% and 2.7% rather than the 1.2% and 1.7% shown for Coordinated system members (those with Social Security coverage).

After June 30, 1989

For members first hired after June 30, 1989 the retirement benefits (with average salary defined as the average of the highest five successive annual salaries) are as follows:

> 1.7% of average salary for each year of allowable service with augmented actuarial reduction (approximately 4.0%-5.5% per year) for each month the member is under the full Social Security retirement benefit eligible age but not to exceed age 66. Under current federal law, the retirement age for full Social Security retirement benefits is age 65 for persons born in 1937 or earlier. For persons born in 1938 to 1942, Social Security gradually increases the retirement age for full Social Security benefits until it reaches age 66 for those persons born in 1943 to 1954. For those born in 1955 through 1959, the retirement age gradually increases up to age 67. For those born in 1960 and later, the retirement age is 67.

Early retirement benefit eligibility is age 55 with 3 or more years of allowable service.

Deferred Retirement

Members with three or more years of allowable service (ten or more years of allowable service if termination of teaching service occurs before July 1, 1987, and five or more years of allowable service if termination of teaching service occurs after June 30, 1987, but before May 16, 1989) who terminate teaching service in schools covered by the association may have their retirement benefit deferred until they attain age 55 or older. The benefit is augmented by 3% interest compounded annually until January 1 of the year following attainment of age 55 and 5% thereafter until the retirement benefit begins.

July 1, 1997 Increase

Effective July 1, 1997, all benefit recipients received an actuarially equivalent permanent increase based on a change in the post retirement interest assumption from 5% to 6%. This increase recognizes that future post retirement annual adjustments will be 1% less. Members who terminate service after June 30, 1997 and whose benefits commence during the period July 2, 1997 through July 1, 2002 receive a percentage of the July 1, 1997 permanent increase as follows:

July 2, 1997 - July 1, 1998	50%
July 2, 1998 - July 1, 1999	40%
July 2, 1999 - July 1, 2000	30%
July 2, 2000 - July 1, 2001	20%
July 2, 2001 - July 1, 2002	10%

Annuity Plan Options

Six different annuity plan options are available to TRA members providing monthly benefit payments for as long as the annuitant lives. Plan A-1 provides the highest possible monthly benefit, but terminates upon the member's death. A member may choose to provide survivor benefits to a designated beneficiary(ies) by selecting one of the five plans which have survivorship features.

1. Life Plan A-1, For Life of Member
2. Life Plan B-1, Guaranteed Refund
3. Life Plan C-3, 15-Year Certain
4. Life Plan E-1, 100% Survivorship with "Bounceback"
5. Life Plan E-2, 50% Survivorship with "Bounceback"
6. Life Plan E-3, 75% Survivorship with "Bounceback"

Post Fund Increases

The required reserves needed to pay retirement benefits are transferred from TRA's regular assets to the Minnesota Post Retirement Investment Fund (Post Fund) at the time of retirement. Benefits are increased annually based on the post-retirement adjustment calculation described in Minnesota Statutes, section 11A.18, subdivision 9. There is a guarantee that benefits will never be decreased below the original amount established at retirement as adjusted by the annual increases.

Combined Service Annuity

Any member who has combined total years of allowable service which meet the minimum vesting requirements with any two or more of the Minnesota public retirement funds that participate in the combined service annuity program may elect to receive a combined service annuity upon compliance with eligibility requirements of the covered funds in which allowable service was established.

Refunds

Upon termination of teaching service and application, TRA will issue a refund of a member's accumulated contributions plus 5% interest compounded annually if termination occurred before May 16, 1989, and 6% interest compounded annually if termination occurred on or after May 16, 1989. A refund will be issued only if the member has officially resigned from employment and the official refund application form is submitted no sooner than 30 days after termination of teaching service.

Repayment of Refunds

Members who return to teaching service after previously withdrawing their contributions may repay these contributions upon completing two years of allowable service. The repayment must include interest of 8.5%, compounded annually from the date of the refund.

Disability Benefits

An active member, who becomes disabled after at least three years of allowable service, is eligible to apply for a total and permanent disability benefit provided at least two of the required three years of allowable service are performed after last becoming a member. State statute defines total and permanent disability as the inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to be of long continued and indefinite duration. An indefinite duration is a period of at least one year.

Survivor Benefits

If a Coordinated member dies before retirement, the total amount of accumulated contributions plus 6% interest compounded annually is paid to the surviving spouse or, if there is none, to the designated beneficiary. Any survivor benefits payable from Social Security are in addition to the TRA survivor benefit. In some cases, a joint and survivor annuity (described below) may be selected instead of this benefit.

If a Basic member dies before retirement, survivor benefits are payable to a dependent spouse and/or dependent children. The minimum benefit is equal to 50% of the Basic member's monthly average salary paid in the last full fiscal year preceding death, subject to a family maximum of $1,000 per month. In some cases, a joint and survivor annuity (described below) may be selected instead of this benefit.

If the member is not married and there are no dependent children, then the total amount of accumulated contributions plus 6% interest compounded annually is paid to the designated beneficiary.

Joint and Survivor Annuity

The surviving spouse of a married member with at least three years of allowable service credit may elect to receive the joint and survivor annuity benefit instead of the lump sum benefit. The annuity is payable monthly to the spouse or to a designated beneficiary for as long as the spouse or beneficiary lives; however, payments terminate upon the death of the spouse or beneficiary with no remaining benefits for other beneficiaries. In lieu of a lifetime benefit, only a spouse may elect to receive actuarially equivalent payments for a period certain of 5, 10, 15 or 20 years.

The amount of the annuity is based upon the high-five formula and the ages of the member and the spouse or designated beneficiary at the time of the member's death. The member's accumulated deductions and interest plus the employer's contributions are used to provide the benefit. The surviving spouse of an eligible member has a choice of the joint and survivor annuity benefit or the lump sum benefit. If there is no surviving spouse, actuarially equivalent payments may be made for a period certain for any surviving dependent child under the age of 20.

Ten-Year Summary of Revenue
(By Source)

Year Ended June 30	Member Contributions	Employer Contributions	Net Investment Income	Other	Total
1988	$ 75,488,713	$148,607,095	$ 314,711,337	$ 600,954	$ 539,408,099
1989	81,728,962	160,288,707	490,671,524	915,744	733,604,937
1990	84,542,414	166,098,804	520,610,905	926,288	772,178,411
1991	89,313,081	159,439,219	430,877,172	1,964,986	681,594,458
1992	91,505,605	162,369,508	712,965,243	1,942,689	968,783,045
1993	94,709,399	168,070,511	688,071,570	2,347,431	953,198,911
1994	100,803,239	171,854,594	710,189,034	8,752,052	991,598,919
1995	143,535,906	179,671,657	666,099,808	553,171	989,860,542
1996	148,051,326	184,495,447	1,221,792,461	713,733	1,555,052,967
1997	154,160,516	191,670,080	2,296,019,494	704,736	2,642,554,826

Ten-Year Summary of Expenditures
(By Type)

Year Ended June 30	Retirement Benefits	Survivor Benefits	Disability Benefits	Refunds	Administrative Expenses	Other	Total
1988	$144,210,986	$2,079,182	$1,953,743	$ 5,627,523	$2,183,506	$2,773,766	$158,828,706
1989	156,417,938	2,267,668	2,164,380	5,347,598	2,493,783	2,903,073	171,594,440
1990	174,693,669	2,641,650	2,456,735	6,445,983	2,631,691	5,074,347	193,944,075
1991	194,589,338	2,921,349	2,904,585	5,554,181	2,790,089	5,061,999	213,821,541
1992	220,352,768	3,314,799	3,399,088	5,494,749	2,895,659	6,116,742	241,573,805
1993	249,018,533	3,719,037	3,892,680	4,749,970	3,124,192	5,770,675	270,275,087
1994	300,482,282	4,341,112	4,213,376	3,583,342	3,338,007	6,838,750	322,796,869
1995	328,764,719	5,125,383	4,967,050	4,619,063	3,665,748	8,854,935	355,996,898
1996	366,352,840	6,080,640	5,638,668	5,039,811	3,835,501	8,439,350	395,386,810
1997	414,414,893	6,887,894	6,285,354	10,898,914	4,552,372	638,751	443,678,178

Summary of Changes in Membership

Fiscal Year ending June 30, 1997

Active and Inactive Members

	Active		Inactive	
	Basic	Coordinated	Basic	Coordinated
Total June 30, 1996	82	68,408	86	22,125
Additions	0	6,652	4	4,750
Deletions				
Service retirement	(25)	(1,484)	(12)	(253)
Death	—	(52)	(1)	(38)
Refunds	—	(713)	(1)	(1,361)
Writeoffs	—	—	—	(1,046)
Terminated (no refund)	(3)	(4,325)	—	—
Returns to active	—	—	—	(1,221)
Data Adjustments	—	14	—	(23)
Total June 30, 1997	**54**	**68,500**	**76**	**22,933**

	Basic System	Coordinated System	Total
Active	54	68,500	68,554
Inactive	76	22,933	23,009
Total	130	91,433	91,563

Summary of Changes in Membership (continued)

Fiscal Year ending June 30, 1997

Annuitants

	Basic			Coordinated		
	Men	Women	Total	Men	Women	Total
Total annuitants June 30, 1996	2,065	3,082	5,147	7,892	9,387	17,279
Members retired during year	14	25	39	903	865	1,768
Annuities cancelled	—	—	—	(1)	(1)	(2)
Annuitants deceased during year	(43)	(128)	(171)	(146)	(247)	(393)
Total annuitants June 30, 1997	2,036	2,979	5,015	8,648	10,004	18,652
Annuitants not receiving warrants June 30, 1997	—	—	—	(10)	(3)	(13)
Total active annuitants June 30, 1997	2,036	2,979	5,015	8,638	10,001	18,639

Other Annuitants

	Former College Supplemental Retirement Annuities			Former Variable Annuities		
	Men	Women	Total	Men	Women	Total
Active annuitants June 30, 1996	79	56	135	536	333	869
Members retired during year	1	—	1	—	—	—
Members re-employed or terminated by law	(1)	—	(1)	(2)	—	(2)
Annuitants deceased during year	(1)	(4)	(5)	(4)	(5)	(9)
Total annuitants June 30, 1997	78	52	130	530	328	858
Annuitants not receiving warrants June 30, 1997	—	—	—	—	—	—
Total active annuitants June 30, 1997	78	52	130	530	328	858

Summary of Changes in Membership (continued)

Fiscal Year ending June 30, 1997

Beneficiaries of Members Deceased Prior to Retirement

	Joint & Survivor Annuities			Basic Survivor Annuities		
	Men*	Women*	Total	Men	Women	Total
June 30, 1996	305	127	432	5	70	75
Added during year	32	17	49	—	—	—
Terminated during year	(4)	(2)	(6)	(1)	(3)	(4)
Cancellation	—	—	—	—	—	—
Total June 30, 1997	**333**	**142**	**475**	**4**	**67**	**71**

* Gender of member

Disabilitants

	Basic System			Coordinated System		
	Men	Women	Total	Men	Women	Total
June 30, 1996	14	6	20	180	211	391
Added during year	1	1	2	29	37	66
Died during year	—	—	—	(11)	(10)	(21)
Transferred to retirement	(3)	(1)	(4)	(11)	(13)	(24)
Resumed employment	—	—	—	(2)	(2)	(4)
Disabilitants not receiving warrants on June 30, 1997	—	—	—	(1)	—	(1)
Total Active Disabilitants June 30, 1997	**12**	**6**	**18**	**184**	**223**	**407**

Beneficiaries of Retired Members

	Basic System			Coordinated System		
	Men*	Women*	Total	Men*	Women*	Total
June 30, 1996	173	53	226	554	151	705
Added during year	33	8	41	79	19	98
Annuities terminated by law	(9)	(8)	(17)	(17)	(8)	(25)
Deaths	(5)	(1)	(6)	(12)	(5)	(17)
Total June 30, 1997	**192**	**52**	**244**	**604**	**157**	**761**

* Gender of member

Distribution of Active Members

As of June 30, 1997

	Years of Service								
Age	**< 1**	**1-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30+**	**All**
< 25	1,434	136							1,570
25-29	2,590	5,132	536						8,258
30-34	826	2,726	3,459	297					7,308
35-39	1,011	1,507	2,094	2,413	360	1			7,386
40-44	998	1,741	1,690	1,569	2,624	592			9,214
45-49	916	1,636	1,891	1,571	1,805	4,345	1,351		13,515
50-54	492	969	1,071	1,127	1,166	1,768	4,581	816	11,990
55-59	305	350	412	547	665	873	2,013	1,832	6,997
60-64	155	152	189	149	167	262	410	435	1,919
65+	91	108	25	28	20	30	42	53	397
All	8,818	14,457	11,367	7,701	6,807	7,871	8,397	3,136	68,554

Average Annual Earnings of Active Members

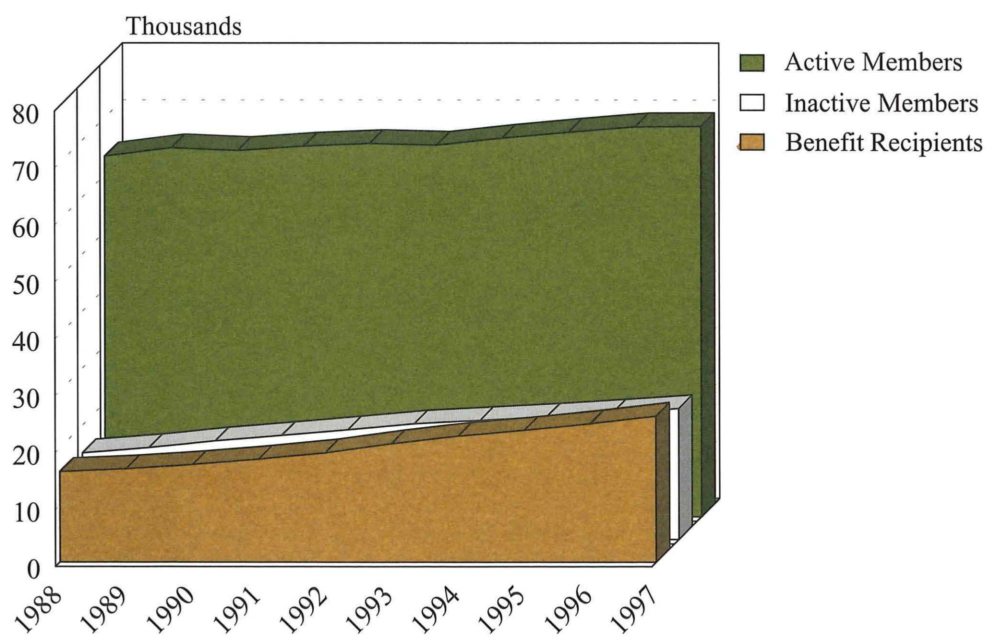
For Fiscal Year Ended June 30, 1997

	Years of Service								
Age	**< 1**	**1-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30+**	**All**
< 25	16,390	24,606							17,102
25-29	14,555	24,761	30,935						21,961
30-34	13,911	23,464	31,819	36,737	28,257				26,878
35-39	12,499	23,306	31,504	38,353	40,797	28,949			29,920
40-44	12,660	21,999	32,164	38,364	42,807	46,022			33,108
45-49	11,611	21,286	32,206	38,604	42,679	46,206	47,360		37,647
50-54	11,743	19,136	30,610	38,612	43,238	47,083	49,352	50,352	41,822
55-59	9,773	17,637	26,375	36,717	42,400	47,330	51,499	51,514	43,970
60-64	8,411	10,551	22,218	31,777	41,708	48,466	52,397	53,915	39,834
65+	6,984	8,170	25,151	33,341	43,344	45,486	53,079	53,645	26,157
All	13,529	22,815	31,349	38,120	42,675	46,584	49,714	51,581	34,066

Ten-Year Summary of Membership

Year Ended June 30	Active Members	Inactive Members	Benefit Recipients
1987	61,283	15,032	15,459
1988	63,326	15,188	15,892
1989	64,796	16,092	16,385
1990	64,324	17,311	17,136
1991	65,093	18,273	18,094
1992	65,557	19,242	19,212
1993	65,268	20,309	20,810
1994	66,514	20,901	22,137
1995	67,558	21,514	23,168
1996	68,490	22,211	24,307
1997	68,554	23,009	25,681

Ten-Year Summary of Membership
(In Thousands)



Schedule of Participating Employers

As of June 30, 1997

Independent School Districts (351)

Ada-Borup #2854
Adrian #511
Aitkin #1
Albany #745
Albert Lea #241
Alden #242
Alexandria #206
Annandale #876
Anoka-Hennepin #11
Ashby #261
Atwater-Cosmos-Grove City #2396
Audubon #21
Austin #492
BDRSH #3001
Badger #676
Bagley #162
Balaton #411
Barnesville #146
Barnum #91
Battle Lake #542
Beardsley #57
Becker #726
Belgrade-Brooten-Elrosa #2364
Belle Plaine #716
Bellingham #371
Bemidji #31
Benson #777
Bertha-Hewitt #786
Big Lake #727
Bird Island-Olivia-Lake Lillian #2534
Blackduck #32
Blooming Prairie #756
Bloomington #271
Blue Earth #2148
Braham #314
Brainerd #181
Brandon #207
Breckenridge #846
Brewster #513
Brooklyn Center #286
Browerville #787
Browns Valley #801
Brownton #421
Buffalo #877
Buffalo Lake-Hector #2159
Burnsville #191
Butterfield #836
Byron #531
Caledonia #299
Cambridge-Isanti #911
Campbell-Tintah #852
Canby #891
Cannon Falls #252
Carlton #93
Cass Lake #115
Cedar Mountain #2754
Centennial #12
Chaska #112
Chatfield #227
Chisago Lakes #2144
Chisholm #695
Chokio-Alberta #771
Clearbrook-Gonvick #2311
Cleveland #391
Climax #592
Clinton-Graceville #55
Cloquet #94
Cold Spring #750
Columbia Heights #13
Comfrey #81
Cook County #166
Cromwell #95
Crookston #593
Crosby-Ironton #182
Cyrus #611
Dassel-Cokato #466
Dawson #378
Deer River #317
Delano #879
Delavan #218
Detroit Lakes #22
Dilworth-Glyndon-Felton #2164
Dover-Eyota #533
Duluth #709
Eagle Valley #2759
East Central #2580
East Grand Forks #595
Eden Prairie #272
Eden Valley #463
Edgerton #581
Edina #273
Elgin-Millville #806
Elk River #728
Ellsworth #514
Elmore #219
Ely #696
Emmons #243
Esko #99
Evansville #208
Eveleth-Gilbert #2154
Fairmont-Ceylon #2752
Faribault #656
Farmington #192
Fergus Falls #544
Fertile-Beltrami #599
Fillmore Central #2198
Fisher #600
Floodwood #698
Foley #51
Forest Lake #831
Fosston #601
Frazee #23
Fridley #14
Fulda #505
Gibbon-Fairfax-Winthrop #2365
Glencoe-Silver Lake #2859
Glenville #245
Goodhue #253
Goodridge #561
Granada-Huntley-E. Chain #2536
Grand Meadow #495
Grand Rapids #318
Greenbush-Middle River #2683
Greenway #316
Grygla #447
Hancock #768
Hastings #200
Hawley #150
Hayfield #203
Hendricks #402
Henning #545
Herman-Norcross #264
Hermantown #700
Heron Lake-Okabena #330
Hibbing #701
Hill City #2
Hills-Beaver Creek #671
Hinckley-Finlayson #2165
Holdingford #738
Hopkins #270
Houston #294
Howard Lake-Waverly-Winsted #2687
Hutchinson #423
International Falls #361
Inver Grove Heights #199
Isle #473
Ivanhoe #403
Jackson #324
Janesville-Waldorf-Pemberton #2835
Jordan #717
Karlstad-Strandquist #2358
Kasson-Mantorville #204
Kelliher #36
Kenyon-Wanamingo #2172
Kerkhoven-Murdock-Sunburg #775
Kimball #739
Kingsland #2137
Kittson Central #2171
La Crescent-Hokah #300
Lake Benton #404
Lake City #813
Lake Crystal-Wellcome Memorial #2071

Lake of the Woods #390
Lake Park #24
Lake Superior #381
Lakefield #325
Lakeview #2167
Lakeville #194
Lamberton #633
Lancaster #356
Lanesboro #229
Laporte #306
Le Center #392
Le Roy #499
Lester Prairie #424
Le Sueur-Henderson #2397
Lewiston #857
Litchfield #465
Little Falls #482
Littlefork-Big Falls #362
Long Prairie-Grey Eagle #2753
Luverne #2184
Lyle #497
Lynd #415
MACCRAY #2180
Mabel-Canton #238
Madelia #837
Mahnomen #432
Mahtomedi #832
Mankato #77
Maple Lake #881
Maple River #2135
Marshall #413
Martin Co. W #2448
McGregor #4
Medford #763
Melrose #740
Menahga #821
Mentor #604
Mesabi East #2711
Milaca #912
Milroy # 635
Minneota #414
Minnetonka #276
Minnewaska #2149
Montevideo #129
Montgomery #394
Monticello #882
Moorhead #152
Moose Lake #97
Mora #332
Morris #769
Mounds View #621
Mountain Iron-Buhl #712
Mountain Lake #173
Murray County Central #2169
NRHEG #2168

Nashwauk-Keewatin #319
Nett Lake #707
Nevis #308
New London-Spicer #345
New Prague #721
New Ulm #88
New York Mills #553
Newfolden #441
Nicollet #507
Norman Cty East #2215
Norman Cty West #2527
North Branch #138
North St. Paul-Maplewood #622
Northfield #659
Norwood #108
Ogilvie #333
Oklee #627
Onamia #480
Orono #278
Ortonville #62
Osakis #213
Osseo #279
Owatonna #761
Park Rapids #309
Parkers Prairie #547
Paynesville #741
Pelican Rapids #548
Pequot Lakes #186
Perham #549
Pierz #484
Pillager #116
Pine City #578
Pine Island #255
Pine Point #3333
Pine River-Backus #2174
Pipestone-Jasper #2689
Plainview #810
Plummer #628
Princeton #477
Prinsburg #815
Prior Lake #719
Proctor #704
Randolph #195
Red Lake #38
Red Lake Falls #630
Red Wing #256
Redwood Falls #2758
Remer #118
Richfield #280
Robbinsdale #281
Rochester #535
Rockford #883
Roseau #682
Rosemount-Apple Valley-Eagan #196
Roseville #623

Rothsay #850
Round Lake #516
Royalton #485
Rush City #139
Rushford-Peterson #239
Russell #418
Ruthton #584
St. Anthony-New Brighton #282
St. Charles #858
St. Clair #75
St. Cloud #742
St. Francis #15
St. James #840
St. Louis County #2142
St. Louis Park #283
St. Michael-Albertville #885
St. Peter #508
Sanborn #638
Sartell #748
Sauk Centre #743
Sauk Rapids #47
Sebeka #820
Shakopee #720
Sibley East #2310
Sioux Valley #328
Sleepy Eye #84
So. Koochiching #363
So. St. Paul #6
So. Washington County #833
Southland #500
Spring Grove #297
Spring Lake Park #16
Springfield #85
Staples-Motley #2170
Stephen-Argyle #2856
Stewart #426
Stewartville #534
Stillwater #834
Storden-Jeffers #178
Swanville #486
Thief River Falls #564
Tracy #417
Triton #2125
Truman #458
Tyler #409
Ulen-Hitterdal #914
Underwood #550
United South Central #2134
Upsala #487
Verndale #818
Virginia #706
Wabasha-Kellogg #811
Wabasso #640
Waconia #110
Wadena-Deer Creek #2155

Walker-Hackensack-Akeley #113
Walnut Grove #641
Warren-Alvarado-Oslo #2176
Warroad #690
Waseca #829
Watertown-Mayer #111
Waterville-Elysian-Morristown #2143
Waubun #435
Wayzata #284
West Central Area #2342
W St. Paul-Mendota Heights-Eagan #197
Westbrook #175
Westonka #277
Wheaton #803
White Bear Lake #624
Willmar #347
Willow River #577
Windom #177
Win-E-Mac #2609
Winona #861
Worthington #518
Wrenshall #100
Yellow Medicine East #2190
Zumbrota-Mazeppa #2805

Joint Powers Units (41)

Area Special Ed Coop
Bemidji Regional Interdist. Council
Benton-Stearns Ed. Dist.
Border Region Ed. Dist.
Carver-Scott Ed. Coop.
Central Minnesota ERDC
Central Minnesota ECSU
Fergus Falls Area Special Ed. Coop.
Freshwater Ed. Dist.
Goodhue Co. Ed. Dist.
Hiawatha Valley Ed. Dist.
Intermediate School Dist. #287
Intermediate School Dist. #916
Intermediate School Dist. #917
Lac qui Parle Valley
Lake Agassiz Special Ed. Coop.
Lakes Country Services Coop
Meeker & Wright Special Ed. Coop
Metro Education Coop. Unit
Midstate Ed. Dist.
Midwest Special Ed. Coop.
MN River Valley Special Ed. Coop.
MN Valley Ed. Dist.
MN Valley Cooperative
North Central ECSU #5
N. Country Vocational Coop. Ctr.
Northeast Ed. Dist.
Northwest MN ECSU
Northwest Reg. Interdist. Council
Pine to Prairie Coop. Center
Riverbend Ed. Dist.
Root River Ed. Dist.
Runestone Area Ed. Dist.
Southwest/West Central ECSU
South Central ECSU
Southeast ECSU
Technology and Information
Educational
Services (TIES)
West Central Ed. Dist.
West Central Migrant Project
Wright Technical Center
Zumbro Ed. Dist.

MN State Colleges and Universities (42)

Akita Japan State University
Alexandria Technical College
Anoka-Hennepin Technical College
Anoka-Ramsey Community College
Arrowhead Community College
Bemidji State University
Cambridge Community College
Central Lakes College
Century Community & Technical College
Dakota County Technical College
Fergus Falls Community College
Fond Du Lac Community College
Hennepin Technical College
Hibbing Community College
Inver Hills Community College
Itasca Community College
Lake Superior College
Mankato State University
Mesabi Range Community & Tech. College
Metropolitan State University
Minneapolis Community & Technical College
MnSCU Board Office
Moorhead State University
North Hennepin Community College
Normandale Community College
Northland Community & Technical College
Northwest Technical College
Pine Technical College
Rainy River Community College
Red Wing/Winona Technical College
Ridgewater College
Riverland Community College
Rochester Community & Technical College
South Central Technical College
Southwest State University
Southwestern Technical College
St Cloud State University
St Cloud Technical College
St Paul Technical College
Vermilion Community College
Winona State University
Worthington Community College

Charter Schools (9)

Bluffview Montessori #4001
Dakota Open School #4009
Emily Charter School #4012
New Country Charter School #4007
New Heights Charter School #4003
PACT Charter School #4008
Prairie Island Charter School #4013
Toivola-Meadowlands Charter School #4002
World Learner Charter School #4016

State Agencies (8)

Anoka Metro Regional Treatment Ctr
Brainerd Regional Human Services Ctr
Cambridge Regional Human Services Ctr
Department of Children, Families & Learning
Department of Economic Security
Faribault Regional Treatment Ctr
Faribault Residential Academies
Fergus Falls Regional Treatment Ctr
Higher Education Services Office
MN Center for Arts Education
MN Correctional Facility, Red Wing
MN Correctional Facility, Sauk Center
MN Correctional Facility, Thistledew
MN Department of Corrections
Moose Lake Regional Treatment Ctr
St Peter Regional Treatment Ctr
Teachers Retirement Association
Willmar Regional Treatment Ctr

Professional Organizations (3)

MN Association of School Administrators
MN Education Association
MN Federation of Teachers